

Evaluating the Relational Coordination instrument

Edwards, Kasper; Lundstrøm, Sanne Lykke

Published in:
Book of Proceedings - 11th EAOHP Conference

Publication date:
2014

Document Version
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):
Edwards, K., & Lundstrøm, S. L. (2014). Evaluating the Relational Coordination instrument. In N. J. A. Andreou, A. Jain, D. Hollis, J. Hassard, & K. Teoh (Eds.), *Book of Proceedings - 11th EAOHP Conference: Looking at the past - planning for the future: Capitalizing on OHP multidisciplinary* (pp. 198). European Academy of Occupational Health Psychology.

DTU Library

Technical Information Center of Denmark

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

11th EAOHP Conference

'Looking at the past - planning for the
future: Capitalizing on OHP
multidisciplinarity'

BOOK OF PROCEEDINGS

Sergio Iavicoli
President EAOHP

Philip Dewe
Conference Chair



London 2014

European Academy of Occupational Health Psychology

14-16 April 2014, Birkbeck College, University of London, United Kingdom

BOOK OF PROCEEDINGS

11th Conference of the European Academy of Occupational Health Psychology

'Looking at the past - planning for the future: Capitalizing on OHP multidisciplinary'

Edited by:

Nicholas John Artin Andreou

Aditya Jain

David Hollis

Juliet Hassard

Kevin Teoh



European Academy of Occupational Health Psychology

European Academy of Occupational Health Psychology
Level B, Yang Fujia Building, Jubilee Campus, Wollaton Road
Nottingham, NG8 1BB, United Kingdom

NOTTINGHAM

First published 2014
© EAOHP

All rights reserved. No part of this publication may be reproduced in any material form (including photocopying or storing in any medium by electronic means and whether or not transiently or incidentally to some other use of this publication) without the written permission of the copyright holder except in accordance with the provisions of the Copyright, Designs and Patents Act 1988. Applications for the copyright holder's written permission to reproduce any part of this publication should be addressed to the publishers.

British Library Cataloguing in Publication Data

Proceedings of the 11th European Academy of Occupational Health Psychology
Conference: *Looking at the past - planning for the future: Capitalizing on OHP
multidisciplinarity*

Editors: I. Andreou, N.J.A. II. Jain, A. III. Hollis, D. IV. Hassard, J., V. Kevin Teoh

ISBN (Print version): 978-0-9928786-0-3

ISBN (Online version): 978-0-9928786-1-0

Disclaimer

Every reasonable effort has been made to ensure that the material in this book is true, correct, complete and appropriate at the time of writing. Nevertheless the publishers, the editors and the authors do not accept responsibility for any omission or error, or for any injury, damage, loss or financial consequences arising from the use of the book. The views expressed by contributors do not necessarily reflect those of the European Academy of Occupational Health Psychology.

CONTENTS

PREFACE.....	ii
ORGANIZING COMMITTEE	iii
SCIENTIFIC COMMITTEE	iii
CONFERENCE SPONSORS AND PATRONS	v
DELEGATE FACILITIES	vii
PROGRAMME AT A GLANCE.....	ix
DETAILED CONFERENCE PROGRAMME.....	xvi
KEYNOTE PRESENTATIONS	1
SPECIAL SESSIONS	7
SYMPOSIA	20
PAPERS	139
POSTERS.....	266
AUTHOR INDEX.....	355

PREFACE

The European Academy of Occupational Health Psychology in collaboration with, Birkbeck, University of London welcomes you to London, the 'Cultural Capital of the World', and to Senate House, University of London which is playing host to its 11th conference.

The Academy's first conference took place in 1999 to provide a new platform to promote the development of research, education and practice in the then emerging field of occupational health psychology. That inaugural event was held in Lund, Sweden. In the intervening years, conferences have been held successfully in Nottingham, UK (2000), Barcelona, Spain (2001), Vienna, Austria (2002), Berlin, Germany (2003), Porto, Portugal (2004), Dublin, Ireland (2006), Valencia, Spain (2008), Rome, Italy (2010) and, most recently Zürich, Switzerland (2012). We are delighted to have been able to organise this 11th Academy conference in London and this has in no small part been possible due to the financial and practical support provided by our host institution, Birkbeck University of London, the BPS Division of Occupational Psychology and our international sponsors.

The theme for this year's conference is, 'Looking at the past – planning for the future: Capitalizing on Occupational Health Psychology multi-disciplinarity'. Because occupational health psychology exists at the intersection of behavioral science and occupational health disciplines, it is inclusive of knowledge and methods from psychology, public/occupational health, organizational studies, human factors, and allied fields (such as occupational sociology, industrial engineering, economics, and others). The conference will examine the key developments in the field and identify avenues to further consolidate and advance the discipline. It has a powerful and engaging schedule of keynote, oral and poster presentations as well as special sessions and a debate on the future of OHP with Professor Robert Karasek and Professor Johannes Siegrist.

Lastly, we are proud to welcome Professor Robert Karasek, University of Massachusetts Lowell and Copenhagen University, Professor Tom Cox, Birkbeck, University of London, and Professor Evangelia Demerouti, Eindhoven University of Technology into our College of Fellows in recognition of their exceptional contribution to the discipline of occupational health psychology.

On behalf of the Organising Committee, we would like to thank you for contributing to this conference. We hope it will meet your expectations and will stoke up your enthusiasm. We continue in our commitment to build a members' Academy and will always welcome those who wish to be actively involved going forward. Finally, we would like to thank all of those who have given so generously of their time in helping to make this event a reality.



Philip Dewe
Conference Chair



Sergio Iavicoli
President, EAOHP

ORGANIZING COMMITTEE

Nicholas Andreou, University of Nottingham, UK

Daniel Mari Ripa, University of Oviedo, Spain

Aditya Jain, Nottingham University Business School, UK

Luis Torres, University of Nottingham, UK

Juliet Hassard, Birkbeck College, University of London, UK

Peter Kelly, Health and Safety Executive, UK

David Hollis, Open University, UK

Kelly Sivri, University of Nottingham, UK

Kevin Teoh, Birkbeck College, University of London, UK

Gema Ruiz de Huydobro, University of Deusto, Spain

Chih-Ying Wu, University of Nottingham, UK

SCIENTIFIC COMMITTEE

Julian Barling, Queen's University, Canada

Georg Bauer, ETH Zurich/University of Zurich, Switzerland

Victor Catano, Saint Mary's University, Canada

Mark Cropley, University of Surrey, UK

Nele De Cuyper, K. U. Leuven, Belgium

Hans De Witte, K. U. Leuven, Belgium

Paul Flaxman, City University London, UK

Roxanne Gervais, Health and Safety Laboratory, UK

Sabir Giga, University of Bradford, UK

Birgit Greiner, University of Cork, Ireland

Gudela Grote, ETH Zurich, Switzerland

Jonathan Houdmont, University of Nottingham, UK

Greg Jenny, ETH Zurich/University of Zurich, Switzerland

Maria Karanika-Murray, Nottingham Trent University, UK

Norito Kawakami, The University of Tokyo, Japan
Kevin Kelloway, Saint Mary's University, Canada
Gail Kinman, University of Bedfordshire, UK
Michael Kompier, Radboud University Nijmegen, The Netherlands
Anne Kouvonen, Queen's University Belfast, UK
Thomas Läubli, Kyoto Institute of Technology, Japan / ETH Zürich, Switzerland
Stavroula Leka, University of Nottingham, UK
Vicki Magley, University of Connecticut, USA
Mike O'Driscoll, University of Waikato, New Zealand
Amparo Oliver, University of Valencia, Spain
Per Saksvik Øystein, Norwegian University of Science and Technology (NTNU)
David Palferman, UK Health & Safety Executive, UK
Nicky Payne, Middlesex University London, UK
José M^a Peiró, University of Valencia, Spain
Aileen M. Pidgeon, Bond University, Australia
Norbert Semmer, University of Bern, Switzerland
Akihito Shimazu, The University of Tokyo Graduate School of Medicine, Japan
Robert Sinclair, Clemson University, USA
Timo Sinervo, National Institute for Health and Welfare, Finland
Noreen Tehrani, Chartered occupational, counselling and health psychologist, UK
Lieke ten Brummelhuis, Simon Fraser University, Canada
Lois Tetrick, George Mason University, USA
Eva Torkelson, Lund University, Sweden
Horacio Tovalin, National Autonomous University of Mexico, Mexico
Mo Wang, University of Florida, USA

CONFERENCE SPONSORS AND PATRONS

The following have
generously supported the 11th conference of the
European Academy of Occupational Health Psychology



CAMBRIDGE

JOURNALS

Delegate Access Offer

The Australasian
Journal of
Organisational Psychology



Journal of the APS College of
Organisational Psychologists

Enjoy **free** access to

*The Australasian Journal of
Organisational Psychology*

Simply add offer code **ORP14**
when prompted online at
journals.cambridge.org/trial

Access valid until 30th June 2014

journals.cambridge.org/orp



University of
South Australia

You are invited.

International Commission on Occupational Health – Work
Organization and Psychosocial Factors 2014 Congress

17 - 19 September 2014
Adelaide, South Australia



W  PS

WORK ORGANIZATION & PSYCHOSOCIAL FACTORS



University of
South Australia

For more information visit:
<http://unisa.edu.au/ICOHcongress>

5th ICOH-WOPS Congress , Adelaide, 17-19 September 2014



DELEGATE FACILITIES

Venue

The Conference will be held at Senate House, University of London and Birkbeck College, University of London. The venue is located in the heart of central London. It is a 15 minute walk from the St Pancras and Euston main train stations and well connected by public transport.

The closest underground (Tube) stations are Russell Square and Goodge Street.

Address: Senate House, University of London, Malet Street, London WC1E 7HU, United Kingdom.

Getting there

By Car

There are no parking opportunities at Senate House. Nearest NCP car parks are located at Woburn Place and Bloomsbury Place.

By Tube

Nearest underground stations:

- Russell Square (Piccadilly Line)
- Goodge Street (Northern Line)
- Tottenham Court Road (Central Line and Northern Line)
- Euston Square (Circle Line, Metropolitan Line and Hammersmith and City Line)
- Euston Station (Victoria Line & Northern Line)

By Air

- From Heathrow, the Piccadilly tube line provides a service (approx. 45 minutes) to Russell Square. Or take the Heathrow Express to Paddington (15 minutes) and take a taxi/tube to Senate House.
- From Gatwick, both Network Rail and Gatwick Express run trains to Victoria station (30 minutes) where tube trains and taxis are available.

By Rail

Euston, King's Cross and St. Pancras mainline stations are within walking distance. The other London mainline stations are a short tube or taxi journey away.

Internet access

There is wireless Internet available at Senate House, University of London. Access information is provided in the programme booklet.

Catering

Lunch is included in the delegate fee and refreshments will be available at no cost each morning and afternoon of the conference.

Exhibition stands

During the conference, you are invited to visit the exhibition stands located in Crush Hall. Books and journals relevant to occupational health psychology from Taylor & Francis, Wiley-Blackwell, and Springer will be available.

Presentations (Author Guidelines)

ORAL: Each presentation will last 15 minutes including time for questions. The session chair will introduce each presenter and ensure that presentations are kept to time. All oral presentations must be supported by Microsoft Power Point. Presentations should be on a USB stick and clearly labelled with (i) the name of the lead author, (ii) title of presentation and (iii) day, time and room number of the presentation. Please take your presentation directly to the room allocated for your presentation, where you will be assisted in copying it onto the system, prior to the start of your session (for sessions in the morning at least half an hour prior to the first session, for sessions in the afternoon at the beginning of lunch break or the day before your presentation).

POSTER: The poster should ideally be printed in AO size: 119cm (W) X 84cm (H) in landscape format [maximum size should not exceed 180cm (W) X 100cm (H)]. Authors for poster presentations should bring their posters to the conference venue on the day of the presentation. Tape will be provided. All authors are responsible for placing their own posters according to their assigned numbers and will be assisted by the conference organizing team.

Additional information

Evening reception - Welcome to London, sponsored by the BPS Division of Occupational Psychology: The evening drinks reception will be held on Monday, April 14th from 18:30 – 20:00, in Macmillan Hall, Senate House. Please bring your name badge as there will be no access otherwise.

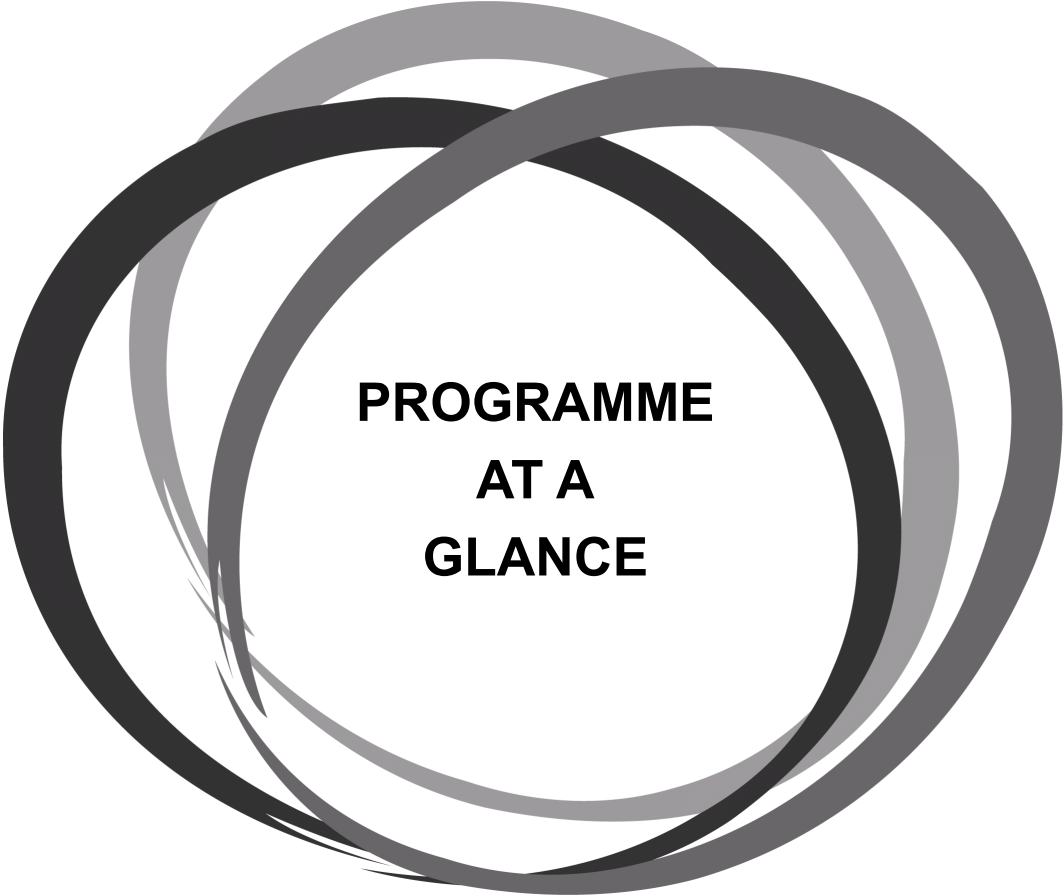
Conference dinner - The conference dinner has been organised at the **UK Houses of Parliament**. As one of the world's most iconic buildings, no other venue in the world is more instantly recognised than the Palace of Westminster. It is impossible to walk through its corridors or dine in its imposing function rooms without a deep sense of awe.

This iconic building is a UNESCO World Heritage Site which stands on a historic riverside location. Rebuilt and extended over the centuries, the most important structure, the 900 year old Westminster Hall, still stands today. The principal function rooms on the upper floors of the New Palace of Westminster, include the Strangers' and Members' Dining Rooms where the pre-dinner drinks and dinner will be served respectively.

If you have reserved a place, please ensure that you have received your named invitation to enter the Parliament from the reception desk.

Further assistance

Should you require any assistance during the conference, please don't hesitate to contact a member of the conference organizing committee at the reception desk.



**PROGRAMME
AT A
GLANCE**

14 April 2014

- 8:00 - 9:00** **Registration**
Crush Hall, Senate House
- 9:00 - 9:30** **Opening Ceremony**
Beveridge Hall, Senate House
- 9:30-10:45** OHP 'Keynote' debate: Looking at the past, planning for the future of OHP
Beveridge Hall, Senate House
- 10:45 - 11:15** **Break**
- 11:15 - 12:45** Symposium: The Dark Side of Leadership: Exploring the Negative Impact on Employee Well-Being
Beveridge Hall, Senate House
- Symposium: 'Modern work times: irregular work time arrangements and work time control'
Deller Hall, Senate House
- Symposium: Job Insecurity - Part 1: Measurement, Antecedents and Moderators
MAL 414, Birkbeck
- Bullying in the Workplace
MAL 415, Birkbeck
- Policy Issues in OHP
MAL 416, Birkbeck
- Organisational Change I
MAL 417, Birkbeck
- 12:45 - 14:15** **Lunch and Poster Session**
Macmillan Hall & Beveridge Hall, Senate House
- Poster Sessions: Macmillan Hall & Beveridge Hall, Senate House
- Antecedents of Stress and Well-being
 - Burnout: Antecedents and Consequences
 - Workplace Health Promotion: Promoting health and healthy behaviours
 - Occupational Health Psychology: Policy, Practice and Consulting
 - Organisational Culture, Development and Leadership
 - Mental and Physical Health and the Workplace
- 13:00 - 14:00** **EAOHP Executive Committee Meeting (by invitation only)**
Deller Hall, Senate House
- 14:15 - 15:45** DOP Symposium: Researching the work/non-work interface: A focus on diversity and difference in sampling, measurement and management
Beveridge Hall, Senate House
- Joint EAOHP - ICOH- WOPS special session: The policy context to the management of psychosocial risks in the workplace
Deller Hall, Senate House
- Symposium: Job Insecurity - Part 2: Longitudinal Evidence and Testing Theoretical Explanations
MAL 414, Birkbeck
- Symposium: How Leaders and Employees themselves can Contribute to Employee Well-Being - Longitudinal and Multilevel Perspectives
MAL 416, Birkbeck

	Symposium: Innovation and Well-Being: Contributes to the Understanding of These Understudied Relationships MAL 417, Birkbeck
	Work-Life Balance I MAL 415, Birkbeck
15:45 - 16:00	Break
16:00 - 17:15	DOP Symposium: People Management – Vital for Employee Health, Wellbeing and Engagement: Research Into Practice <i>Beveridge Hall, Senate House</i>
	Symposium: Managing Implementation - The Roles of Line Managers, Senior Leaders, HR Professionals and Employees in Occupational Health Interventions <i>Deller Hall, Senate House</i>
	Symposium: Psychosocial Safety Climate; Innovation in Multilevel Work Stress Theory and Practice MAL 414, Birkbeck
	Symposium: Resilience Building in UK Policing MAL 415, Birkbeck
	Symposium: Workplace Mistreatment: Examining Antecedents and Outcomes of Incivility and Aggression MAL 417, Birkbeck
	Leadership MAL 416, Birkbeck
17:15 - 17:30	Break
17:30 - 18:30	Workplace Health Promotion <i>Deller Hall, Senate House</i>
	Safety Culture and Climate I MAL 414, Birkbeck
	Work-Life Balance II MAL 415, Birkbeck
	Job Insecurity and Employability MAL 416, Birkbeck
	Burnout I MAL 417, Birkbeck
18:30 - 20:00	Evening Reception - 'Sponsored by the BPS Division of Occupational Psychology' <i>Macmillan Hall, Senate House</i>

15 April 2014

8:00 - 8:30	Registration <i>Crush Hall, Senate House</i>
8:30 - 09:45	Symposium: Investigating Psychological Well-Being after Occupational Hazardous Substance Exposure: A Multidisciplinary Perspective <i>Beveridge Hall, Senate House</i>
	Symposium: Individuals in the Organization: How Individual Differences Affect Well-being <i>Deller Hall, Senate House</i>
	Symposium: Occupational Health Psychology Applied to Police Forces' Stress Studies MAL 414, Birkbeck

	Symposium: Wellbeing in Academic Employees: An International Perspective <i>MAL 416, Birkbeck</i>
	Personality and Individual Differences <i>MAL 415, Birkbeck</i>
	Burnout II <i>MAL 417, Birkbeck</i>
09:45 - 10:00	Break
10:00 - 11:30	Symposium: Recovery from Work: Cognitive and Affective Processes <i>Beveridge Hall, Senate House</i>
	Symposium: Organizational Health Intervention Research: Current Empirical Developments <i>Deller Hall, Senate House</i>
	Symposium: Police Stress in the 21 Century: Causes, Consequences, and Interventions <i>MAL 414, Birkbeck</i>
	Symposium: Interdisciplinary Approaches in Occupational Health Psychology Research in the Canadian Military Context: From Data Analysis to Program Refinement <i>MAL 416, Birkbeck</i>
	Psychometrics I <i>MAL 415, Birkbeck</i>
	Intervention Evaluation <i>MAL 417, Birkbeck</i>
11:30 - 11:45	Break
11:45 - 12:30	Work & Stress – Routledge Keynote Address: The UK Management Standards: Looking Forwards, Looking Back <i>Beveridge Hall, Senate House</i>
12:30 - 14:00	Lunch and Poster Session Macmillan Hall & Beveridge Hall, Senate House
	Poster Sessions: <i>Macmillan Hall & Beveridge Hall, Senate House</i>
	– Antecedents of Stress and Well-being
	– Burnout: Antecedents and Consequences
	– Employee Motivation, Satisfaction, and Performance
	– Work engagement, Commitment, and Performance
	– Work-life Balance and Work-family Conflict
	– Resilience and Wellbeing at Work
	– Gender and Diversity
12:45 - 13:45	EAOHP General Assembly (Open session) <i>Deller Hall, Senate House</i>
14:00 - 15:30	EU-OSHA Special Session: Managing and Assessing Work Related Stress in Europe. State of Art of National Strategies <i>Beveridge Hall, Senate House</i>
	Symposium: Organizational Health Intervention Research: New Approaches towards Evaluation <i>Deller Hall, Senate House</i>
	Symposium: Appreciation at Work: New Insights <i>MAL 414, Birkbeck</i>
	Symposium: The Role of Personality Factors in Occupational Well-being <i>MAL 416, Birkbeck</i>

	Gender and Diversity <i>MAL 415, Birkbeck</i>
	Focus on Occupational Groups I <i>MAL 417, Birkbeck</i>
15:30 - 15:45	Break
15:45 - 17:15	Symposium: Management of the Psychosocial Work Environment in the Petroleum Industry <i>Beveridge Hall, Senate House</i>
	Symposium: Occupational E-Mental Health: An Effective and Promising Route to Foster Health and Well-Being in Stressed Employees? Part 1 <i>Deller Hall, Senate House</i>
	Symposium: Work-Family Conflict and Well-Being: Diary and Longitudinal Studies <i>MAL 414, Birkbeck</i>
	Symposium: Balancing Work with Life: A Gender Perspective <i>MAL 416, Birkbeck</i>
	Working Hours <i>MAL 415, Birkbeck</i>
	Antecedents of Work-Related Stress and Well-Being I <i>MAL 417, Birkbeck</i>
17:15 - 17:30	Break
17:30 - 18:30	Symposium: Healthy Workplaces and Healthy Workers: The Impact of Organizational Initiatives <i>Beveridge Hall, Senate House</i>
	Symposium: Occupational E-Mental Health: An Effective and Promising Route to Foster Health and Well-Being in Stressed Employees? Part 2 <i>Deller Hall, Senate House</i>
	Symposium: Relationships of Work Demands, Depression and Burnout to Cognitive Processes and their Neuronal Correlates <i>MAL 414, Birkbeck</i>
	Psychometrics II <i>MAL 415, Birkbeck</i>
	Work-Life Balance III <i>MAL 416, Birkbeck</i>
	Emotions and Work <i>MAL 417, Birkbeck</i>
19:00 onwards	Conference Dinner <i>Westminster Palace, UK Parliament</i>

16 April 2014

8:00 - 8:30	Registration <i>Crush Hall, Senate House</i>
8:30 - 9:45	Symposium: Contextualizing the Job Demands-Resources Model <i>Beveridge Hall, Senate House</i>
	Symposium: Status Quo and Issues of Burnout Studies in Korea with Samples for Students, Counselors, and Soldiers <i>Deller Hall, Senate House</i>
	Mindfulness <i>MAL 414, Birkbeck</i>

	Focus on Occupational Groups II <i>MAL 415, Birkbeck</i>
	Physical Health and Work <i>MAL 416, Birkbeck</i>
	Counterproductive Behaviour at Work <i>MAL 417, Birkbeck</i>
9:45 - 10:00	Break
10:00 - 11:30	Symposium: Studies of Worker Well-Being: Impacts of Positive and Negative Experiences at Work <i>Beveridge Hall, Senate House</i>
	Symposium: Building and Restoring Resources at Work: Intervention Success and Boundary Conditions <i>Deller Hall, Senate House</i>
	Symposium: New research trends on proactivity at work <i>MAL 414, Birkbeck</i>
	Organisational Change II <i>MAL 416, Birkbeck</i>
	Absenteeism and Presenteeism <i>MAL 417, Birkbeck</i>
11:30 - 11:45	Break
11:45 - 12:30	EAOHP Fellowship Keynote Address: Job demands and job resources: Given and crafted <i>Beveridge Hall, Senate House</i>
12:30 - 14:00	Lunch and Poster Session <i>Macmillan Hall & Beveridge Hall, Senate House</i>
	Poster Sessions: Macmillan Hall & Beveridge Hall, Senate House
	– Employee Motivation, Satisfaction, and Performance
	– Employee Retention and Sickness Absence
	– Working Conditions and Health
	– Organizational and Psychosocial Interventions and Outcomes
	– Measurement and tools in Occupational Health Psychology
	– Mental and Physical Health and the Workplace
	– Workplace Violence, Bullying and Harassment
12:45 - 13:45	ICG-OHP Meeting (by invitation only) <i>Deller Hall, Senate House</i>
14:00 - 15:30	Antecedents of Work-Related Stress and Well-Being II <i>Beveridge Hall, Senate House</i>
	Work and Health I <i>Deller Hall, Senate House</i>
	Interventions <i>MAL 414, Birkbeck</i>
	Resources at Work I <i>MAL 415, Birkbeck</i>
	Resources at Work II <i>MAL 416, Birkbeck</i>
	Work Engagement <i>MAL 417, Birkbeck</i>
15:30 - 15:40	Break

15:40 - 17:10 Antecedents of Work-Related Stress and Well-Being III
Beveridge Hall, Senate House

Work and Health II
Deller Hall, Senate House

Challenges and Interventions
MAL 414, Birkbeck

Other Issues in OHP
MAL 415, Birkbeck

Safety Culture and Climate II
MAL 416, Birkbeck

Work-Life Balance IV
MAL 417, Birkbeck

17:10 - 17:30 Closing Session
Beveridge Hall, Senate House



**DETAILED
CONFERENCE
PROGRAMME**

14 April 2014

Registration

8:00 - 9:00 **Crush Hall, Senate House**

Opening Ceremony

9:00 - 9:30 **Beveridge Hall, Senate House**

OHP 'Keynote' Debate: Looking at the past, planning for the future of OHP

9:30 - 10:45 **Beveridge Hall, Senate House**

OHP Debate: Looking at the past, planning for the future of OHP
Robert Karasek, Johannes Siegrist

Break

10:45 - 11:15

Symposium: The dark side of leadership: Exploring the negative impact on employee well-being

11:15 - 12:45 **Beveridge Hall, Senate House** **Chair: Karina Nielsen**

The dark side of leadership: Exploring the negative impact on employee well-being
Karina Nielsen

Why does Abusive Supervision undermine loyalty and efficacy? A decrease in health as explanation
Kathleen Otto, Torsten J. Holstad, Christiane Stempel, Thomas Rigotti

Do transformational leaders influence job crafting, burnout and work engagement? A longitudinal field study
Karina Nielsen, Kevin Daniels, Marisa Salanova, Thomas Clausen

Managing sickness absence in organizations: Exploring the role of the transformational leader
Karina Nielsen, Kevin Daniels

Patterns of 'good' and 'bad' leadership behaviours, and their relationships with individual outcomes.
Anders Skogstad, Guy Notelaers

Inconsistent leadership and employee health and safety
E. Kevin Kelloway, Jane Mullen, Lori Francis, Kate Dupre, Wendy Carroll

Symposium: 'Modern work times: Irregular work time arrangements and work time control'.

11:15 - 12:45 **Deller Hall, Senate House** **Chair: Debby Beckers**

'Modern work times: Irregular work time arrangements and work time control'.
Debby Beckers, Michiel Kompier, Goran Kecklund

Development of a method to evaluate characteristics of working hours objectively
Mikko Harma, Annina Ropponen, Tarja Hakola, Sampsa Puttonen, Aki Koskinen, Mikael Sallinen, Phil Bohle

A prospective study of the association between shiftwork & prescription drug use
Phil Tucker, Paula Salo, Jussi Vahtera

Bus drivers working hours and its effect on sleep and fatigue: The influence of split shifts
Goran Kecklund, Anna Anund, Carina Fors, Jonas Ihlstrom

Change in work-time control and work-home interference among Swedish working men and women

Constanze Leineweber, Linda Magnusson Hanson, Goran Kecklund

Worktime control and employee well-being indicators: An interplay between need for-, access to-, and use of work time control

Hylco Nijp, Debby Beckers, Michiel Kompier, Seth van den Bossche, Sabine Geurts

Symposium: Job insecurity - part 1: Measurement, antecedents and moderators

11:15 - 12:45

MAL 414, Birkbeck

Chair: Hans De Witte

Job insecurity - part 1: Measurement, antecedents and moderators

Hans De Witte

The Italian version of the qualitative job insecurity scale: A multilevel CFA

Margherita Pasini, Margherita Bondino, Hans De Witte

Wartime effects on perceptions of job insecurity in Syria

William Reisel, Ali Bassam Mahmoud

Exemplification and perceived job insecurity: Associations with self-rated performance and emotional exhaustion

Nele De Cuyper, Bert Schreurs, Tinne Vander Elst, Elfi Baillien, Hans De Witte

Investigating the association between job insecurity and burnout: The moderating and mediating role of performance-based self-esteem

Victoria Blom, Anne Richter, Lennart Hallsten, Pia Svedberg

How does employability affect the negative relationship among job insecurity and workers' well-being? A comparison among models of direct, mediated or interaction relationships

Jose María Peiró, José Ramos, Yolanda Estreder

Bullying in the Workplace

11:15 - 12:45

MAL 415, Birkbeck

Chair: Juliet Hassard

A study focusing on organizational antecedents of workplace incivility

Eva Torkelson, Elinor Schad, Björn Karlson, Martin Bäckström

Lifestyle, problem solving, workplace bullying and strenuous working conditions: a moderated mediation model

Milda Astrauskaite, Roy Max Kern, Guy Notelaers

A longitudinal analysis of employee functioning in contexts of workplace bullying: the role of psychological need frustration

Sarah-Geneviève Trépanier, Claude Fernet, Stéphanie Austin

From the experience to the action: how emotions and moral disengagement predict disruptive behaviours by nurses

Roberta Fida, Marinella Paciello, Carlo Tramontano, Gaia Urso

Cyberbullying in work life

Rebecka Forssell, Tuija Muhonen

Policy issues in OHP

11:15 - 12:45

MAL 416, Birkbeck

Chair: Noreen Tehrani

Ten years of HSE's management standards for work-related stress: Problems and prospects

Colin Mackay, David Palferman

Shifting attitudes: The national education programme for general practitioners in work and health in Great Britain

Sayeed Khan, Debbie Cohen

Policy-level interventions in occupational health: What works and when - A UK case study analysis

David Hollis, Stavroula Leka, Aditya Jain, Nicholas Andreou, Gerard Zwetsloot

Audit of psychosocial risk management system: Between tacit knowledge and standardization

Anne Jespersen, Peter Hasle

Factors driving organisational level intervention in managing the psychosocial work environment: Implications for policy and practice.

Nicholas Andreou, Stavroula Leka, Aditya Jain

Economic globalization trends and the global distribution of awareness of psychosocial workplace stressors: Policy implications and recommendation for least developed countries

Wilfred Agbenyikey, Robert Karasek

Organisational change I

11:15 - 12:45

MAL 417, Birkbeck

Chair: Timo Sinervo

Are innovation-promoting working conditions also health-promoting?

Mareike Adler, Eva Bamberg

Employees' innovative work behaviour following structural changes in social and health care organisations: how vulnerable is the behaviour to stress and decreased work ability?

Laura Pekkarinen, Timo Sinervo, Merja Sankelo, Johanna Heikkilä

What keeps work unit innovative in organizational change in social and health care?

Timo Sinervo, Johanna Heikkilä, Sami Jantunen, Merja Sankelo, Jukka Piippo, Asta Suomi

Downsizing or expanding - does the type of organizational restructuring play a role in work engagement and job boredom?

Krista Pahkin, Jari Hakanen

The impact of 'organizational rhythmicity'; strengthening of the involvement of employees and managers in change processes

Truus Poels, Joop Kielema, John Klein Hesselink

Managing restructuring as a work environment issue - a mixed methods evaluation

Johan Simonsen Abildgaard, Karina Nielsen

Lunch and Poster Session

12:45 - 14:15

Macmillan Hall & Beveridge Hall, Senate House

Poster session: Antecedents of stress and well-being

12:45 - 14:15

Macmillan Hall & Beveridge Hall, Senate House

Psychosocial hazards and wellbeing in prison educators

Gail Kinman, Siobhan Wray

Construction migrants' labour recruiter payment, health and safety

Haitham Abdalla Hassan, Jonathan Houdmont

Blue Monday and sweet Thursday: A study of employees' workweek mood and time allocation to leisure activities

Julie Menard, Paul E. Flaxman, Annie Foucreault

Stress and depression among nurses

Elisabete Borges, Teresa Rodrigues, Cristina Queiros

New ways of working (NWW) and occupational health: the role of specific job resources

Christian Korunka, Cornelia Gerdenitsch

Consequences of detrimental work environment on physicians' wellbeing and care practice: impact of social support and psychological capital

Leonore Robieux, Nils Myszkowski, Cecile Flahault, Franck Zenasni

The HOUPE study phase I (2002-11) and II (2012-18): Health and organization among University Hospital Physicians in Europe

Lise T Løvseth, Ann Fridner, The HOUPE study group

The customer as psychosocial work environment

Ingrid Schéle, Esther Hauer, Erik Lundkvist, Susanne Tafvelin, Kristina Westerberg, Maria Nordin

An experimental investigation of the effort-reward imbalance model with measures of salivary alpha amylase and continuously recorded heart rate variability

Bradley Wright, Kathleen Landolt, Emma O'Donnell

Poster session: Burnout: Antecedents and consequences

12:45 - 14:15

Macmillan Hall & Beveridge Hall, Senate House

The influence of feelings of guilt on the relationship between burnout and psychosomatic disorders in Portuguese and Spanish teachers

Hugo Figueiredo-Ferraz, Pedro R. Gil-Monte

Personality traits as burnout predictors among police recruits

Cristina Queiros, Antonio Marques, Mariana Kaiseler, Pedro Sousa

The emotional nature of customer service work and its effect on job burnout

Roza Bazinska, Lukasz Baka, Dorota Szczygieł

Emotional regulation strategies and burnout among radiotherapy workers: The moderating role of perceived organizational support

Julie Laurent, Isabelle Bragard, Francis.P. Peree, Philippe Coucke, Isabelle Hansez

Longitudinal predictors of burnout - A systematic review

Wendy Nilsen, Anni Skipstein, Ole Melkevik, Eva Demerouti

Burnout and job satisfaction among portuguese and Brazilian nurses

Sofia Dias, Mary Sandra Carlotto

The development of burnout process: A study in teachers

Beatriz Rabasa, Pedro R. Gil-Monte, Marta Llorca-Pellicer, Estela M. Pardos-Gascón

Poster session: Workplace health promotion: Promoting health and healthy behaviours

12:45 - 14:15

Macmillan Hall & Beveridge Hall, Senate House

Does physical activity have an impact on sickness absence? A systematic review

Neha Amlani, Fehmidah Munir

Work ability and work-related stress: a cross-sectional study of obstetrical nurses in Urban Northeastern Ontario

Behdin Nowrouzi, Nancy Lightfoot, Lorraine Carter, Michel Larivière, Ellen Rukholm, Robert Schinke, Diane Belanger-Gardner, Basem Gohar

Involvement and emotional regulation in oncology health professionals: construction of an assessment tool

Maria João Cunha, João Paulo Pereira, João Maria Pereira

Linking patient health behaviours to patients' perceptions of the fairness of their health care providers

Camilla Holmvall, Lori Francis, E. Kevin Kelloway, Peter Twohig

Development and initial validation of new model of work recognition

Ofelia Tatu, Anna Maria Berardi, Marcel Lourel

Stress-actors relation retrospective analysis through PubMed publications, over the past 23 years

Ramona Jurcau, Ioana Jurcau, Razvan Pirvan, Nicolae Colceriu

Poster session: Occupational health psychology: Policy, practice and consulting

12:45 - 14:15

Macmillan Hall & Beveridge Hall, Senate House

Does need for concentration modify the effect of office type on health and productivity?

Aram Seddigh, Christina Bodin Danielson, Erik Berntsson, Hugo Westerlund

Evaluation of wellbeing among call centre staff: a practical measure

Helen McFarlane, Rich Neil, Karianne Backx, Andy Smith

Perceptions of emotional labour: A preliminary study from a Kenyan sample

Mbusiro Chacha

Highlights regarding the provision of psychological services in the field of law enforcement

Darius Mihai Turc, Mirela Turc

The work positive profile: A new web-based psychosocial audit tool for the Republic of Ireland

Robert Kerr, Patricia Murray, Suzanne Boyd

The RED methodology: A tool for testing psychological risks.

Isabel M. Martinez, Marisa Salanova, Susana Llorens

Health and safety practitioners' role definition and psychosocial challenges of the job

Sara Leitao, Birgit Greiner

Workplace response to breast cancer: A qualitative investigation of psychosocial factors in the context of serious illness

Lucie Kocum, Catherine Loughlin, Lynne Robinson, Jennifer Dimoff

Towards the development of a permanent system for the assessment of workers' perception of health and safety risks at work: An Italian survey

Fabio Boccuni, Benedetta Persechino, Cristina Di Tecco, Matteo Ronchetti, Bruna Maria Rondinone, Antonio Valenti, Iavicoli Sergio

An analysis of the coverage of psychosocial factors at work in Corporate Social Responsibility standards

Daniel Mari Ripa, Aditya Jain

Forensic assessment of workplace mobbing: The role of the ergonomics and human factor expert

Julio Rodríguez-Suárez, Javier Llana-Álvarez

Poster session: Organisational Culture, Development and Leadership

12:45 - 14:15 **Macmillan Hall & Beveridge Hall, Senate House**

Self-determination theory: A way forward for occupational health interventions?

Susanne Tafvelin, Andreas Sterling

The influence of workload on health: The moderator role of transformational leadership

Estela M. Pardos-Gascón, Hugo Figueiredo-Ferraz, Marta Llorca-Pellicer, Pedro R. Gil-Monte

Problems in the training of occupational mental health practitioners in Japanese graduate schools certified training courses for clinical psychologists

Yasumasa Otsuka

A field-based study of Wildland fire-fighters aimed at assessing physiological and psychological factors contributing to mental and physical fatigue

Céline Boudreau-Larivière, Sandra Dorman, Ayden Robertson, Zachary McGillis, Michel Larivière, Alison Godwin, Tammy Eger

The professionalization of non-profit organizations: A threat for volunteers' wellbeing?

Edwine Goldoni, Donatienne Desmette, Ginette Herman, Tim Vantilborgh

Leader behaviour predicting employee health and job outcomes: The mediating roles of workplace stressors

Lori Francis, Stephanie Gilbert, E. Kevin Kelloway, Natasha Scott

Research methods for simulation-based training in air traffic management

Celine Mühlethaler, Chiara Knecht

Human factors training in air traffic management: a new approach using computer-based simulation methods

Chiara Knecht, Céline Mühlethaler

The effect of trust and openness on safety performance: the role of group safety climate

Anna Paolillo, Silvia A. Silva, Margherita Pasini

Poster session: Mental and physical health and the workplace

12:45 - 14:15 **Macmillan Hall & Beveridge Hall, Senate House**

Examining occupational stress levels in flight attendants

Akram Vaferi, Anita Baghdassarians, Mojgan Mansouri

Workplace bullying and psychological distress: data from the 2010 U.S. National health interview survey

Toni Alterman, Jia Li, James Grosch, Sara Luckhaupt

Working conditions and psychological health in an educational context: a person-centered approach

Alessia Negrini, Jacques Perron, Marc Corbière

Is the burnout process a process of depression? A categorical approach

Renzo Bianchi, Eric Laurent, Irvin Sam Schonfeld

Good practices in promoting mental health in the workplace across WHO regions: a review and evaluation

Kelly Calliope Sivris, Stavroula Leka, Evelyn Kortum

An attempt to distinguish burnout from depression based on major life stress, job-related stress, and social support at work

Renzo Bianchi, Irvin Sam Schonfeld

EAOHP Executive Committee Meeting (by invitation only)

13:00 - 14:00 **Deller Hall, Senate House**

DOP Symposium: Researching the work/non-work interface: A focus on diversity and difference in sampling, measurement and management

14:15 - 15:45 **Beveridge Hall, Senate House** **Chair: Gail Kinman**

Researching the work/non-work interface: A focus on diversity and difference in sampling, measurement and management

Gail Kinman, Almuth McDowall

Teleworker isolation and well-being outcomes

Alexandra Beauregard, Kelly Basille, Esther Canonico

The development of 'actionable' strategies for individuals, supervisors and organisations to facilitate the improvement of work-life balance, job effectiveness and well-being of remote e-workers

Christine Grant, Louise Wallace, Peter Spurgeon

Managing your own work-life balance - what works in the police?

Almuth McDowall

Boundary management strategies in work-linked couples

Gail Kinman

Having our voices heard - different narratives of work-life balance

Julia Fernando, Almuth McDowall

Joint EAOHP - ICOH- WOPS special session: The policy context to the management of psychosocial risks in the workplace

14:15 - 15:45 **Deller Hall, Senate House**

Joint EAOHP - ICOH - WOPS special session: The policy context to the management of psychosocial risks in the workplace

Sergio Iavicoli, Stavroula Leka, Maureen Dollard, Evelyn Kortum

Symposium: Job insecurity - part 2: Longitudinal evidence and testing theoretical explanations

14:15 - 15:45 **MAL 414, Birkbeck** **Chair: Hans De Witte**

Job insecurity - part 2: Longitudinal evidence and testing theoretical explanations.

Hans De Witte

Qualitative job insecurity and performance: a spiral effect

Gabriel Fischmann, Hans De Witte, Coralia Sulea, Dragos Iliescu

Perceived job insecurity and well-being over time: Polynomial regression and response surface approach

Kaisa Kirves, Ulla Kinnunen, Saija Mauno, Anne Mäkikangas

Why job insecurity hinders idea generation: An application of the Job demands-resources model

Wendy Niesen, Hans De Witte

Kicking the other dog: the indirect relationship between job insecurity and being a workplace bully through psychological contract fulfilment as conditional upon causal attribution to the organization

Yannick Griep, Tinne Vander Elst, Elfi Baillien, Hans De Witte

Explaining the cross-lagged relationships of qualitative job insecurity with job strain and psychological withdrawal by perceived control

Tinne Vander Elst, Anne Richter, Magnus Sverke, Katharina Näswall, Nele De Cuyper, Hans De Witte

Symposium: How leaders and employees themselves can contribute to employee well-being - longitudinal and multilevel perspectives

14:15 - 15:45

MAL 416, Birkbeck

Chair: Jari Hakanen

How leaders and employees themselves can contribute to employee well-being - longitudinal and multilevel perspectives

Jari Hakanen, Rebecca Brauchli

Job resources and quality of leadership as predictors of work engagement among organizational newcomers

Salla Toppinen-Tanner, Jari Hakanen, Markku Jokisaari, Pertti Mutanen, Mikko Nykänen, Jukka Vuori

The role of sense of coherence in the motivational process of the job demands-resources model

Katharina Vogt, Gregor Jenny, Rebecca Brauchli, Jari Hakanen, Georg Bauer

Taking the purpose of job crafting into account: development and validation of a general scale

Els Vanbelle, Anja Van den Broeck, Hans De Witte

The power of resources - can they break the loss spiral between job demands and work-family conflict?

Rebecca Brauchli, Katharina Vogt, Jari Hakanen, Georg Bauer

Does servant leadership boost work engagement via job crafting? An individual and team level study

Jari Hakanen, Pertti Mutanen

Symposium: Innovation and well-being: Contributes to the understanding of these understudied relationships

14:15 - 15:45

MAL 417, Birkbeck

Chair: Susana M. Tavares

Innovation and well-being: contributes to the understanding of these understudied relationships

Susana M. Tavares

The road from transformational leadership to creative work behaviour

Pascale M. Le Blanc, Koen W. Crooymans

Promoting voice behaviours: the role of socio-moral climate and engagement

Silvia A. Silva

Climate for innovation as a preventive factor of burnout in police officers

Esther M. Garcia-Buades, Carmen Ramis-Palmer, M. Antonia Manassero

Well-being outcomes of resource investment and conservation for survivors of redundancies: context matters

Michelle Hammond, Christine Cross, Ciara Farrell, Dawn Eubanks

Voice initiatives, affect at work and employee's health

Susana M. Tavares

Work-Life Balance I

14:15 - 15:45

MAL 415, Birkbeck

Chair: Anne Kouvonen

Psychological distress and work/home strains as prospective predictors of sickness absence in Norwegian mothers and fathers over a six year-period.

Wendy Nilssen, Anni Skipstein

No pain, no gain: Sacrificing work-family balance and higher income for career opportunity and the role our mentors play

Brooke Baker, Deanna Burns, Mary Kate Wood, Megan Morgan, Robin Kowalski, Shelby McKinney

Smartphone use and work-home interference: the moderating role of social norms and work engagement

Daantje Derks, Maria Tims, Arnold Bakker

Linking job demands to partner's mental detachment and exhaustion: social support seeking as a crossover mechanism

Sara Tement, Christian Korunka

Love won't tear us apart, but work will: how job stressors relate to constructive and destructive reactions to one's romantic partner's negative behavior

Dana Unger, Sabine Sonntagag, Cornelia Niessen, Angela Neff

High-performance work systems, job strain and job engagement: what is the role of work-home interference?

Audrey Babic, Florence Stinglhamber, Isabelle Hansez

Break

15:45 - 16:00

DOP Symposium: People management – vital for employee health, wellbeing and engagement: Research into practice

16:00 - 17:15

Beveridge Hall, Senate House

Chair: Emma Donaldson-Feilder

People management – vital for employee health, wellbeing and engagement: research into practice

Emma Donaldson-Feilder, Rachel Lewis

Managing for sustainable employee engagement and wellbeing

Rachel Lewis, Emma Donaldson-Feilder

Management and well-being at work: the role of individual differences

Ivan Robertson

Managing the wellbeing of an ageing workforce

Sheena Johnson

Symposium: Managing implementation - the roles of line managers, senior leaders, HR professionals and employees in occupational health interventions

16:00 - 17:15

Deller Hall, Senate House

Chair: Ulrica von Thiele Schwarz

Managing implementation - the roles of line managers, senior leaders, HR professionals and employees in occupational health interventions

Ulrica von Thiele Schwarz, Henna Hasson

Expectations meet reality - line managers, hr professionals and senior managers views on their respective roles and role fulfilment in occupational health interventions

Henna Hasson, Kristina Palm, Karin Villaume, Ulrica von Thiele Schwarz

Responsibilities and commitment of top management and first line management in organizational-level interventions - what difference does it make?

Liv Gish, Christine Ipsen, Signe Poulsen

Supervisor's health-oriented readiness for change in the context of a multilevel stress management intervention project: determinants of baseline levels and of longitudinal change patterns

Désirée Füllemann, Gregor Jenny, Rebecca Brauchli, Georg Bauer

Employees and line managers as actively crafting organizational-level interventions

Karina Nielsen

Symposium: Psychosocial safety climate; innovation in multilevel work stress theory and practice

16:00 - 17:15

MAL 414, Birkbeck

Chair: Maureen Dollard

Psychosocial safety climate; innovation in multilevel work stress theory and practice

Maureen Dollard, Christian Dormann

The dynamic role of psychosocial safety climate in frontline healthcare workplaces

Amy Zadow, Maureen Dollard, Michelle Tuckey, Peter Chen

Psychosocial safety climate, emotional demands, burnout and depression: a longitudinal multilevel study in the malaysian private sector

Awang Idris, Maureen Dollard

Psychosocial safety climate, violence, bullying, and physical demands in the aetiology of MSDs and workers' compensation

Tessa Bailey, Penny Richards, Sarven McLinton, Maureen Dollard

National and international standards for psychosocial safety climate

Maureen Dollard, Tessa Bailey, Penelope Richards

Symposium: Resilience building in UK policing

16:00 - 17:15

MAL 415, Birkbeck

Chair: Noreen Tehrani

Resilience building in UK policing

Noreen Tehrani

Introducing psychological screening for high risk policing roles

Noreen Tehrani, Caroline Russell

Resilience in Public Protection

Noreen Tehrani, Elizabeth Eades

Child abuse investigation: protecting officers and staff

Noreen Tehrani, Nicky Piper

Trauma therapy: providing therapy as part of an organisationally informed intervention

Noreen Tehrani, Emma Wray

Symposium: Workplace mistreatment: Examining antecedents and outcomes of incivility and aggression

16:00 - 17:15

MAL 417, Birkbeck

Chair: Arla Day

Workplace mistreatment: examining antecedents and outcomes of incivility and aggression

Arla Day

Incidence and correlates of workplace incivility at a daily level

Vicki J. Magley, Jenna C. Shapiro, Michael P. Leiter, Howard Tennen

Affect and exhaustion before and after Incivility: A daily diary perspective

Michael P. Leiter, Vicki J. Magley, Jenna C. Shapiro, Howard Tennen

Aggression experiences of bus drivers

Shauna L. Smith, E. Kevin Kelloway

Taking the bad with the good: understanding resident aggression in context

Jennifer H.K. Wong, E. Kevin Kelloway, Margaret C. McKee, Ann McInnis, Judith Godin

Leadership

16:00 - 17:15

MAL 416, Birkbeck

Chair: Pascale Le Blanc

Influence of authentic leadership, trust, and areas of work-life on adverse patient outcomes
Carol A. Wong, Lisa Giallonardo

Transformational leadership and employee's daily job crafting behaviours: exploring the moderating role of promotion focus

Jørn Hetland¹, Arnold B. Bakke², Hilde Hetland¹, Evangelina Demerouti³

A leadership perspective on safety communication

Malin Mattson, Johnny Hellgren, Sara Göransson

Identifying change profiles of ethical culture and their associations with well-being: A two-year longitudinal study

Mari Huhtala, Muel Kaptein, Taru Feldt

Does ethical organizational culture associate with self-reported sickness absences? A Finnish public sector study

Maiju Kangas, Mari Huhtala, Taru Feldt

Break

17:15 - 17:30

Workplace health promotion

17:30 - 18:30

Deller Hall, Senate House

Chair: Gregor Jenny

Occupational sitting time and its association with work engagement and job demand-control
Fehmidah Munir, Jonathan Houdmont, Stacy Clemes, Kelly Wilson, Robert Kerr, Ken Addley

Workplace stress and insufficient physical activity: prospective evidence from a large cohort study

Anne Kouvonen, Jussi Vahtera, Tuula Oksanen, Jaana Pentti, Ari Väänänen, Tarja Heponiemi, Paula Salo, Marianna Virtanen, Mika Kivimäki

Co-occurrence of lifestyle factors and psychosocial job characteristics

Vera JC Mc Carthy, Ivan J Perry, Janas M Harrington, Birgit A Greiner

More carrot, less stick: exercise, leadership styles and changing attitudes to work

Matthew Jenkinson, Prudence Milliar

Safety culture and climate I

17:30 - 18:30

MAL 414, Birkbeck

Chair: Jessica Lang

Positive safety culture, employee well-being and organizational learning

Marina Järvis, Anu Virovere, Piia Tint

Understanding culture: assessing firefighter safety climate

Jennifer Taylor

Work related stress mediation in the relationship between safety climate and safety outcomes: An experience in the metal workers sector
Luciano Romeo, Margherita Brondino, Gianluigi Lazzarini, Francesca Benedetti, Margherita Pasini

Safety climate and occupational accidents and injuries: differences among permanent and contingency workers
Sara Leitao, Birgit Greiner

Work-Life Balance II

17:30 - 18:30 **MAL 415, Birkbeck** **Chair: Lois Tetrick**

Longitudinal predictors of sick leave among mothers and fathers - a systematic review
Anni Skipstein, Wendy Nilsen

Do different dimensions of organizational citizenship behaviour have different effects on work-family enrichment and work-family conflict?
Lynn Germeys, Sara De Gieter

Work-life balance and medically assisted reproduction (MAR): MAR uses experiences of workplace support
Nicola Payne, Olga van den Akker, Christina Constantinou, Suzan Lewis

Work-family interface and well-being in dual-earner couples: a daily diary study examining the spillover-crossover model
Sara De Gieter, Lynn Germeys, Arnold Bakker

Job insecurity and employability

17:30 - 18:30 **MAL 416, Birkbeck** **Chair: Achim Elfering**

Discrepancy in flexibility and employment security's expectations: impact on well-being at work
Fabrice Travagianti, Audrey Babic, Isabelle Hansez

Quality of working life - the case for a segmented approach to intervention?
Andrew Weyman, Katherine Blackford, Elizabeth Hellier

The relationship between occupational expertise and perceived employability: The type of relationship and causality
Ellen Peeters, Nele De Cuyper, Hans De Witte

Child labour and delinquency: The less known psychosocial risk
Heriberto Valdez Bonilla

Burnout I

17:30 - 18:30 **MAL 417, Birkbeck** **Chair: Michael Ertel**

Burnout and team absenteeism: multilevel and cross level effects within a call centre
Chiara Consiglio, Guido Alessandri, Laura Borgogni

Academic staff burnout: identification, prevention and management
John Hamilton

New nurses burnout and workplace wellbeing: the influence of authentic leadership and psychological capital
Heather Laschinger, Roberta Fida

Personality and burnout among malaysian hr managers: the mediating role of emotional labour
Michael Mustafa, Angeli Santos, Terk Chern Gwi

Evening Reception - 'Sponsored by the BPS Division of Occupational Psychology'

18:30 - 20:00 **Macmillan Hall, Senate House**

15 April 2014

Registration

8:00 - 8:30 **Crush Hall, Senate House**

Symposium: Investigating psychological well-being after occupational hazardous substance exposure: A multidisciplinary perspective

8:30 - 9:45 **Beveridge Hall, Senate House** **Chair: Jessica Lang**

Investigating psychological well-being after occupational hazardous substance exposure: a multidisciplinary perspective

Jessica Lang

Health protection in the context of terror management: a moderated mediation approach considering health efficacy beliefs after occupational hazardous substance exposure

Jessica Lang, Petra Gaum, Thomas Kraus

Extending and applying the terror management health model: towards a comprehensive model of occupational hazardous substance exposure and mental health

Petra Gaum, Thomas Kraus, Jessica Lang

The impact of physiological mechanisms in the development of mental syndromes after occupational exposure to hazardous substances

Franziska Putschögl, Petra Gaum, Thomas Schettgen, Monika Gube, Thomas Kraus, Jessica Lang

Longitudinal effects of occupational PCB exposure on quality adjusted life years (QALY)

André Esser, Monika Gube, Thomas Schettgen, Thomas Kraus, Jessica Lang

Symposium: Individuals in the organization: How individual differences affect well-being

8:30 - 9:45 **Deller Hall, Senate House** **Chair: Arla Day**

Individuals in the organization: how individual differences affect well-being

Arla Day

Profiles of job demands control and support: a person-centered approach to understanding work characteristics and well-being

Patrick Horsman, Kevin Kelloway

The problem with trying to be perfect: how perfectionist concerns impedes treatment outcomes in the able program

Nikola Hartling, Arla Day, Lori Francis

Volunteer motivation & well-being

Aleka MacLellan, Kevin Kelloway

Attachment in the organization: Implications for incivility and burnout

Michael Leiter, Arla Day, Lisa Price

Symposium: Occupational health psychology applied to police forces' stress studies

8:30 - 9:45

MAL 414, Birkbeck

Chair: Cristina Queiros

Occupational health psychology applied to police forces' stress studies

Cristina Queiros

The relationship between burnout and aggressivity among police officers

Cristina Queiros, Antonio Leitao da Silva, Mariana Kaiseler, Antonio Marques

Stress and coping among Portuguese police officers: daily diaries study

Susana Rodrigues, Mariana Kaiseler, Cristina Queiros

Longitudinal study on engagement levels among Portuguese police officers

Mariana Kaiseler, Cristina Queiros, Susana Rodrigues

Resilience in the Dutch police force: integrating bodies, minds and spirits

Annika Smit

Symposium: Wellbeing in academic employees: An international perspective

8:30 - 9:45

MAL 416, Birkbeck

Chair: Gail Kinman

Wellbeing in academic employees: an international perspective

Gail Kinman

Effort-reward imbalance and wellbeing in academic employees: different rewards, different outcomes

Gail Kinman

Measuring stressors and strain in academic staff: comparing the fit of the job-demand-control support and job demand resources models

Siobhan Wray

Workaholism, recovery and detachment from work among Irish academics

Victoria Hogan, Michael Hogan, Margaret Hodgins

A multi-case study of HR interventions in Australian universities: critical ingredients for success

Silvia Pignata, Tony Winefield, Carolyn Boyd, Chris Provis

Personality and individual differences

8:30 - 9:45

MAL 415, Birkbeck

Chair: Hazel Ramos

The moderating effects of personality on the stress-burnout relationship: a study among nurses in Malaysia

Hazel Melanie Ramos, Ronald Teoh Li Tiah

The effectiveness of schema-focused approach in managing work stress

Pavel Kasyanik, Elena Romanova, Maria Galimzyanova

The influence of perfectionism on employees' work day and evening well-being: A day-level study of British workers

Sonja Carmichael, Paul E. Flaxman

The interactive effects of work control and self-determination on coping, psychological distress, intrinsic motivation, and meaningful life

Stacey Parker, Nerina Jimmieson

The links between the 'big five' personality traits and job crafting

Raymond Randall, Jonathan Houdmont, Robert Kerr, Kelly Wilson, Ken Addley

Burnout II

8:30 - 9:45

MAL 417, Birkbeck

Chair: Maria Peeters

The LANE study: new longitudinal data on burnout development among nurses during education and the first years of working life

Ann Rudman, Petter Gustavsson

Personality traits and burnout in secondary school teachers

Santiago De Ossorno García, Estela Montejo Martín, Rosario Martínez Arias, Javier Martín Babarro

Relationship between burnout peculiarities and positive personality characteristics among medical personnel in Lithuania

Loreta Gustainiene

Anger-related emotions as a source of job burnout among nurses: the moderating effect of trait emotional intelligence

Dorota Szczygiel

Break

9:45 - 10:00

Symposium: Recovery from work: Cognitive and affective processes

10:00 - 11:30

Beveridge Hall, Senate House

Chair: Sabine Geurts

Recovery from work: cognitive and affective processes

Sabine Geurts, Mark Cropley

Job skill discretion and emotion control strategies as antecedents of recovery from work

Noora Jalonen, Marja-Liisa Kinnunen, Lea Pulkkinen, Katja Kokko

When Friday's workload feels like Monday's: how unfinished tasks enhance employees' rumination over the weekend

Christine Syrek, Conny Antoni, Mareike Hoheluechter

The effect of vacation on subjective and objective sleep of school teachers reporting high and low work-related rumination

Mark Cropley, Hannah Drewett

Have fun! The role of pleasure in the daily recovery process

Madelon van Hooff, Irene de Pater

Recovery among helicopter emergency medical service (HEMS) pilots

Mirjam Radstaak, Sabine Geurts, Debby Beckers, Jos Brosschot, Michiel Kompier

Symposium: Organizational health intervention research: Current empirical developments

10:00 - 11:30

Deller Hall, Senate House

Chair: Christine Ipsen

Organizational health intervention research: current empirical developments

Christine Ipsen, Gregor Jenny

Work related changes and new understandings of prevention: results of multi-level participatory interventions in four SMEs

Christine Ipsen, Signe Poulsen, Liv Gish

Linking process to employee outcomes, an empirical cross national study

Susanne Tafvelin, Ulrica von Thiele Schwarz, Henna Hasson

The "organizational health index" - development and application in research and practice
Gregor Jenny, Rebecca Brauchli, Désirée Füllemann, Georg Bauer

Training health related leader-follower interaction: results of summative evaluations
Torsten Holstad, Thomas Rigotti, Kathleen Otto, Christiane Stempel, Gisela Mohr

The evaluation of a multiplier health intervention program for low SES workers
Christine Busch, Julia Clasen, Eva Winkler, Julia Vowinkel

Symposium: Police stress in the 21 century: Causes, consequences, and interventions

10:00 - 11:30 **MAL 414, Birkbeck**

Chair: Jonathan Houdmont

Police stress in the 21st century: causes, consequences, and interventions
Jonathan Houdmont

Using the job demands-resources model to predict work-life conflict among UK police officers
Gail Kinman, Jonathan Houdmont

Which work characteristics predict employee outcomes for police custody officers? An examination of generic and occupation-specific characteristics
Jonathan Houdmont, Raymond Randall

Longitudinal relations between psychosocial hazard exposure and performance behaviour in police officers
Jonathan Houdmont, Raymond Randall

Understanding workplace health in context: an application of mental health prevention guidelines to the policing industry
Amanda Allisey, Kathryn Page, Angela Martin, Irena Tchernitskaia, Nicola Reavley, Anthony LaMontagne, Andrew Noblet

Creating healthy workplaces: coaching leaders to prevent stress in an Australian policing organisation
Kathryn Page, Amanda Allisey, Andrew Noblet, Anthony LaMontagne

Symposium: Interdisciplinary approaches in occupational health psychology research in the Canadian military context: From data analysis to program refinement

10:00 - 11:30 **MAL 416, Birkbeck**

Chair: Jennifer Lee

Interdisciplinary approaches in occupational health psychology research in the Canadian military context: from data analysis to program refinement
Jennifer Lee

Pre-military mental health symptoms as risk factors for post-concussive symptoms among Canadian military personnel returning from overseas deployment
Jennifer Lee, Bryan Garber, Mark Zamorski

Occupational outcomes after diagnosis of a deployment-related mental disorder in a large cohort of Canadian armed forces personnel: a survival analysis approach
David Boulos, Mark Zamorski

Challenges and opportunities for stress management in the military context: highlights of the 'stress: take charge!' evaluation results
Jennifer Born, Jennifer Lee, Andrena Pierre, Christine Dubiniecki

Evaluation of a new educational program delivered during a third-location decompression program for Canadian armed forces (CAF) personnel returning from Afghanistan
Mark Zamorski, Bryan Garber, Suzanne Bailey, Kim Guest, David Boulos

The relationship between occupational factors and mental health in a military population
Christine Dubiniecki

Psychometrics I

10:00 - 11:30

MAL 415, Birkbeck

Chair: **Timo Sinervo**

Slacking at work: Development and validation of the soldiering scale

Toon Taris, Baran Metin, Maria Peeters (*withdrawn*)

Evaluating the relational coordination instrument

Kasper Edwards, Sanne Lykke Lundstrøm

Occupational health cultural maturity: concept, measurement and application to industry

Jane Hopkinson, Jennifer Lunt

Developing a performance indicator for psychosocial risk in the oil and gas industry

Linn Iren Vestly Bergh, Siri Hinna, Stavroula Leka, Aditya Jain

Sample analysis of the organizational ability evaluation CO 94 & CO 2000

Ioana-Daniela Oros, Monica Albu

Factorial validity and reliability of the multidimensional scale organizational climate (EMCO)

Juana Patlan-Perez

Intervention evaluation

10:00 - 11:30

MAL 417, Birkbeck

Chair: **Georg Bauer**

The effect of immediate feedback: evaluation of an occupational health web-based intervention tool (ISAT – Interactive Self-Assessment Tool)

Liliana Dias[†], Debora Vansteenwegen, Inge Van den Brande, Sofie Tayemans, Yasmin Handaja

CareerSKILLS: effectiveness of a career development intervention for young employees

Jos Akkermans, Veerle Brenninkmeijer, Roland Blonk, Wilmar Schaufeli

The Cronicle Workshop: A Participatory Method for Evaluating Organizational Interventions and Outcomes

Signe Poulsen, Liv Gish, Christine Ipsen

Organisational mapping: determining organisation-specific factors for developing interventions in organisations

Arjella Van Scheppingen, Gerard Zwetsloot

A follow up study on the whole inail methodology to assess and manage work-related stress

Cristina Di Tecco, Tiziana Castaldi, Sara Vitali, Matteo Ronchetti, Simone Russo, Antonio Valenti, Sergio Iavicoli

Duty fitness in bus drivers: presentation and testing of a new model

Ross Owen Phillips, Torkel Bjørnskaug

Break

11:30 - 11:45

Work & Stress – Routledge Keynote Address: The UK management standards: Looking forwards, looking back

11:45 - 12:30

Beveridge Hall, Senate House

The UK management standards: Looking forwards, looking back

Thomas Cox

Lunch and Poster Session

12:30 - 14:00

Poster session: Antecedents of stress and well-being

12:30 - 14:00 Macmillan Hall & Beveridge Hall, Senate House

Exploring factors that are critical to building a resilient workforce

Dina Themistocleous, Andrew Weyman, David Wainwright

Collective stress

Tanja Kirkegaard

Mediating functioning of experienced difficulties in concentration for relationships of work stressors to aspects of health

Grit Tanner, Eva Bamberg, Maren Kersten, Agnessa Kozak, Albert Nienhaus

The association between work-related rumination and physical illness symptoms

Leif W Rydstedt, Mark Cropley

Physical health of university students in Austria: gender and age differences

Elisabeth Noehammer, Kathrin Wiesner

A multilevel approach to the study of customer interaction and stress and well-being

Esther Hauer

Daily rewarding interactions role in enhancing daily well-being levels in workers

Raquel Rodríguez-Carvajal, Marta Herrero, Rocío López-Diago, Oscar Lecuona

Academic justice, academic engagement and its role in performance in a pre-occupational sample

Ramon Rodríguez Montalban, Isabel Martínez Martínez, Marisa Salanova Soria, Israel Sánchez-Cardona

Emotional health of university students in Austria: Socio-economic differences

Elisabeth Noehammer, Claudia Lugger-Deutschmann, Elfriede Thanecker

Easing the pain of overload at work: resources, higher status, and the enhanced buffering hypothesis

Jonathan Koltaj, Scott Schieman

The impact of early maladaptive schemas in the workplace: moderation of the effect of occupational role stress on anxiety and depression

Gema Ruiz de Huydobro, Izaskun Orue

Poster session: Burnout: Antecedents and consequences

12:30 - 14:00 Macmillan Hall & Beveridge Hall, Senate House

The relationship between engagement and burnout: a comparison between fire-fighters and nurses

Jorge Sinval, Natália Vara, Cristina Queiros, Alexandra Marques Pinto, Sônia Regina Pasian, João Marôco

Burnout in police officers: the role of organizational demands and job rewards

Beata Basinska

Organizational predictors of burnout in a sample of Italian primary and secondary school teachers

Daniela Converso, Sara Viotti, Gloria Guidetti, Rosa Badagliacca

When and how management-related problems predict burnout in SME owner-managers: the role of loneliness, self-esteem, and entrepreneurial orientation

Claude Fernet, Olivier Torres, Stéphanie Austin, Josée St-Pierre

Effect of work overload and burnout (chronic stress) on the quality of work life

Juana Patlan-Perez

The symptoms of burnout syndrome and the role of dysfunctional attitudes among Hungarian health care professionals

Zsuzsanna Kerekes, Tunde Edes, Nora Kopasz, Laszlo Mangel, Monika Tiszberger, Caleb Leduc, Michel Larivière

Expanding the occupational health methodology: a concatenated neural network approach to model the burnout process in Chinese nurses

Felix Ladstätter, Eva Garrosa, Bernardo Moreno, Vicente Ponsoda, Liang Youxin

Poster session: Employee motivation, satisfaction, and performance

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

The linking role of cognitive appraisal in day-level effects of time pressure on performance

Roman Prem, Matea Paškvan, Bettina Kubicek, Christian Korunka

Relationship between spiritual values and psychological capital among university employees

Shahin Zehra, Akbar Husain

who procrastinates more: university students or white-collar workers?: a study of active and passive procrastination and achievement goal orientation

Richard Hicks, James Storey

I “want” or I “ought” to work: a motivational analysis of the role of persistent fatigue and autonomy support on nurses sickness absenteeism and perceived quality of work

Stéphanie Austin, Claude Fernet

Poster session: Work engagement, commitment, and performance

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Daily antecedents of state work engagement and their associations with mental health

Dorota Reis, Annekatrin Hoppe

The importance of conducting regular safety inspections In small and medium size enterprises

Behdin Nowrouzi, Basem Gohar, Behnam Nowrouzi-Kia, Martyna Garbaczewska, Olena Chapovalov, Lorraine Carter, Michel Larivière

State work engagement, state mood, and their associations with time pressure: An ambulatory assessment study

Charlotte Arndt, Dorota Reis, Tanja Lischetzke

From organizational commitment to professional burnout: the role of perceived organizational justice

Giedre Geneviciute-Janoniene, Aukse Endriulaitiene

The general practitioner – an endangered professional group

Marie Gustafsson Sendén, Ann Fridner

What work factors are important for researchers' well-being and presence at work?

Hedvik Haaheim-Simonsen, Steffen Torp, Hege Forbech Vinje

Staying engaged and enthusiastic: Using the JDR to understand work engagement amongst employees in the early childhood sector in Australia

Prudence Milllear, Simone Chong

Person-centered approach vs. Variable-centered approach in determining relationship between organizational commitment and work-family conflict

Giedre Geneviciute-Janoniene, Aukse Endriulaitiene

The relationship between work stressors and work wellness of managers in a large mining house

Monica Smith, Nicolene Barkhuizen

Relationships at work: A Brazilian perspective

Ana Maria Rossi

Poster session: Work-life balance and work-family conflict

12:30 - 14:00 Macmillan Hall & Beveridge Hall, Senate House

How does control at work and at home relate to the balance between work and family for woman and men in different employment grades? Results from the Whitehall II study

Helena Falkenberg, Jenny Head

Investigating Canadian nurses' quality of work life and stress in urban, rural, and remote acute care locations in Northeastern Ontario

Judith Horrigan, Nancy Lightfoot, Michel Lariviere, Kristen Jacklin

Employees' work and family interaction and its relationship to subjectively perceived well-being

Loreta Gustainiene, Laura Tamosaityte

Parallel processes underlying work-to-family conflict and facilitation

Lois Tetrick, Qikun Niu, Clifford Haimann

Poster session: Resilience and wellbeing at work

12:30 - 14:00 Macmillan Hall & Beveridge Hall, Senate House

Feasibility and preliminary outcomes of a brief mindfulness-based resilience training program for human service professionals.

Aileen Pidgeon, Lenard Pidgeon, Amelia-Rose Read, Frances Klaassen

Well-being at work across Europe: An assessment of the concept

Roxane Gervais, Marie-Amelie Buffet, Lieven Eeckelaert, Mark Liddle, Zinta Podniece

Personality and well-being in Russian and Australian university students

Liudmila Dementiy, Richard Hicks

Change and stability in subjective well-being over the transition from higher education to employment

Petra Lindfors, Daniel Hultell, Ann Rudman, J. Petter Gustavsson

Academic resilience scale: a construct validity approach in Spanish university students

Isabel M. Martínez, Isabella Meneghel, Marisa Salanova

Learning to Survive: The Role of Learning Resources to Develop Team Resilience and Improve Performance

Israel Sánchez-Cardona, Marisa Salanova Soria

Creative self-efficacy, work engagement, and the moderating role of openness to experience: a resource perspective

I-Shuo Chen, Jui-Kuei Chen

Poster session: Gender and diversity

12:30 - 14:00 Macmillan Hall & Beveridge Hall, Senate House

The impact of menopause on working life: a survey of women in the UK

Juliet Hassard, Sara J. MacLennan, Amanda Griffiths

The gaps between vocational interests of youngsters and labour market demands

Marija Molan, Martin Molan

Social health of university students in Austria: gender and age differences
Elisabeth Noehammer, Astrid Linortner-Rabel

The changing world of work in the Italian nursing sector: the impact on nurses mental health and their intention to leave the profession
Antonio Valenti, Cristina Di Tecco, Valeria Boccuni, Antonella Oliverio, Pasquale Fruscella, Sergio Iavicoli

EAOHP General Assembly (Open session)

12:45 - 13:45 **Deller Hall, Senate House**

EU-OSHA Special Session: Managing and assessing work related stress in Europe. State of art of national strategies

14:00 - 15:30 **Beveridge Hall, Senate House** **Chair: Sergio Iavicoli**

Managing and assessing work related stress in Europe. State of art of national strategies
Sergio Iavicoli

The UK management standards: Lesson learnt
Peter Kelly

Assessment and management of work-related stress risk in Italy. Updates on INAIL's methodology
Sergio Iavicoli

Strategy and approaches in Germany to assess and manage work-related stress
Michael Ertel

The Belgian SOBANE strategy and the prevention of psychosocial risks (PSR)
Alain Piette

EU-OSHA healthy workplaces campaign 'manage stress'
Malgorzata Milczarek

Symposium: Organizational health intervention research: New approaches towards evaluation

14:00 - 15:30 **Deller Hall, Senate House** **Chair: Georg F. Bauer**

Organizational health intervention research: new approaches towards evaluation
Georg F. Bauer, Karina Nielsen

Evaluation model for organizational health interventions: defining and relating the core concepts of context, process and outcomes
Georg F. Bauer, Gregor J. Jenny, Annemarie Fridrich

Evaluating organizational interventions: a research-based framework for process and effect evaluation
Karina Nielsen, Johan Simonsen Abildgaard

Outcome expectations as a key process indicator in stress-management interventions
Annemarie Fridrich, Gregor J. Jenny, Georg F. Bauer

What drives managers to adopt healthy management practices? Evaluating factors influencing managers' adoption of practices reducing employee exposure to psychosocial risks
Marie-Esther Paradis, Caroline Biron, Geneviève Baril-Gingras, Pierre-Sébastien Fournier, Michel Vézina

Alignment – integrating occupational health with organizational strategies and processes
Ulrica von Thiele Schwarz, Henna Hasson

Symposium: Appreciation at work: New insights

14:00 - 15:30 **MAL 414, Birkbeck**

Chair: Nicola Jacobshagen

Appreciation at work: new insights

Nicola Jacobshagen

Appreciation at work: causes and consequences. A new perspective

Nicola Jacobshagen, Norbert Semmer

Short-term effects of positive events at work as a source of appreciation: a diary study within the healthcare sector

Judith Volmer

Appreciation at work as a longitudinal predictor of strain and commitment over and above other resources

Désirée Stocker, Nicola Jacobshagen, Simone Liechti, Eva Stettler, Isabel Pfister, Norbert Semmer

Illegitimate tasks and recovery: the mediating role of emotions

Rabea Krings, Maria Kottwitz, Eliane Holzer, Franziska Tschan, Norbert Semmer

Appreciation at work as a predictor of well-being

Isabel Pfister, Nicola Jacobshagen, Désirée Stocker, Norbert Semmer

Symposium: The role of personality factors in occupational well-being

14:00 - 15:30 **MAL 416, Birkbeck**

Chair: Anne Mäkikangas

The role of personality factors in occupational well-being

Anne Mäkikangas, Taru Feldt

The general factor of personality and occupational well-being

Dimitri van der Linden

Occupational well-being profiles and personality: a person-centered approach to 17-year longitudinal data

Anne Mäkikangas, Johanna Rantanen, Arnold Bakker, Marja-Liisa Kinnunen, Lea Pulkkinen, Katja Kokko

The interplay between workaholism, work engagement, and burnout: a longitudinal approach

Ilona van Beek, Toon Taris, Wilmar Schaufeli

Overcommitment to work: a stable personality factor or a situation-related state modified by job factors?

Taru Feldt, Anne Mäkikangas, Katriina Hyvönen, Mari Huhtala

Incivility episodes: examining duration and boundary conditions with an interaction-record diary study

Laurenz L. Meier, Sven Gross

Gender and diversity

14:00 - 15:30 **MAL 415, Birkbeck**

Chair: Norbert Semmer

Change in job control and supervisor support on change in cognitive and physical vigor: differential effects for immigrant and native employees in Israel

Vivian Schult, Annekatrin Hoppe, Sharon Tokar

Gender in a university hospital: what do differences between female and male physicians tell us?

Heidi Siller, Angelika Bader, Margarethe Hochleitner

Does diversity in teams foster innovation and promote employees' health?

Stephan Hinrichs, Anja Gerlmaier, Erich Latniak

Gender differences in career prospects – does work-family conflict matter for perceived employability and career opportunities?

Erik Berntson, Katharina Näswall

The gendered life-course and work-life interaction: how part time work relates to variables of work-life interaction for men and women across family-life stages

Ariane Wepfer, Rebecca Brauchli, Gregor Jenny, Oliver Hämmig, Georg Bauer

Focus on occupational groups I

14:00 - 15:30 **MAL 417, Birkbeck**

Chair: Kevin Kelloway

The antecedents and outcomes associated with organisational cynicism among police recruits

Andrew Noblet, Amanda Allisey, Anthony LaMontagne, Kathryn Page

Perceived occupational stress, job performance, social support, intention to stay and staff recognition among expatriate nurses working in a culturally diverse setting in The Kingdom of Saudi Arabia

Hussam Alnusair, Stavroula Leka, Shelia Greatrex-White

The associations of civil aviators' self-disclosures, social supports, stress copings, and flight performance in Taiwan

Chian-Fang Grace Cherng, Jian Shiu

Predicting empathy in health and social care workers: implications for psychological wellbeing

Gail Kinman, Louise Grant, Sandra Leggetter

Break

15:30 - 15:45

Symposium: Management of the psychosocial work environment in the petroleum industry

15:45 - 17:15 **Beveridge Hall, Senate House**

Chair: Eirik Bjerkebak

Management of the psychosocial work environment in the petroleum industry

Linn Iren Vestly Bergh, Eirik Bjerkebak

Integrated system for managing psychosocial risk in Statoil: establishing a performance indicator for psychosocial risk

Linn Iren Vestly Bergh

The organizational safety in oil & gas industry in Malaysia: The management commitment in translating policy into practice

AS Nizam Isha, Angeli Santos, Stavroula Leka

An intervention program for leadership teams in managing the risk of unbalanced workload

Ashild Bakke, Sigurborg Oskarsdottir, Synøve Hallås

Resilience program in Shell

Teri Lillington

A risk-based approach to managing psychosocial risks

Clara Mohl Schack, Jean Pierre Gardair

Symposium: Occupational e-mental health: an effective and promising route to foster health and well-being in stressed employees? Part 1

15:45 - 17:15

Deller Hall, Senate House

Chair: Dirk Lehr

Occupational e-mental health: an effective and promising route to foster health and well-being in stressed employees? Part 1

Dirk Lehr, Anna Geraedts

Effective & viable mind-body stress reduction in the workplace: a randomized controlled trial
Ruth Q Wolever, Kyra J Bobinet, Elizabeth R Mackenzie, Erin Fekete, Catherine A Kusnick, Michael Baime

Efficacy an online recreation training for employees affected by symptoms of insomnia: results from a randomized controlled trial

Dirk Lehr, Hanne Thiart, David Ebert, Bernhard Sieland, Matthias Berking, Heleen Riper

Log in and breathe out: cost-effectiveness of internet-based recreation training for better sleep in stressed employees: results from a randomized controlled trial.

Hanne Thiart, Stephanie Nobis, Dirk Lehr, David Ebert, Matthias Berking, Heleen Riper

A randomized controlled trial of a guided and individualized, web-based, stress management program for stressed managers

Robert Persson Asplund, Jesper Dagö, Gerhard Andersson, Per Carlbring, Brjánn Ljótsson

Symposium: Work-family conflict and well-being: Diary and longitudinal studies

15:45 - 17:15

MAL 414, Birkbeck

Chair: Laurenz L. Meier

Work-family conflict and well-being: diary and longitudinal studies

Laurenz L. Meier, Christoph Nohe

How negative social interactions at work seep into the home

Petra L. Klumb, Sebastian Siegler, Manuel Vökle

Daily conflicts between work and home: a study among working couples

Alfredo Rodríguez-Muñoz, Ana I. Sanz-Vergel

Work-life balance and well-being: a diary study using job demands-resources theory

Inés Cortés, Evangelia Demerouti, Arnold B. Bakker, Marina A. Boz

How job crafting can help working mothers' transition back to work after first child birth: an analysis of the work-family interface across time

Maria C. W. Peeters, Evangelia Demerouti, Elianne van Steenbergen

The chicken or the egg? A meta-analysis of panel studies of the relationship between work-family conflict and strain

Christoph Nohe, Laurenz L. Meier, Karlheinz Sonntag, Alexandra Michel

Symposium: Balancing work with life: A gender perspective

15:45 - 17:15

MAL 416, Birkbeck

Chair: Prudence Milllear

Balancing work with life: a gender perspective

Prudence Milllear

An investigation of the predictors for occupational and non-occupational factors associated with stress-related ailments of men and women: a secondary analysis of the 4th European Working Conditions Survey

Juliet Hassard, Stavroula Leka, Amanda Griffiths, Tom Cox

Holidays and their effect on women's job satisfaction and mental health, in the context of personal and workplace resources.

Prudence Milllear, Roxane Gervais

The occupational and non-occupational factors that predict men's and women's work-life balance: do gender differences exist?

Juliet Hassard, Stavroula Leka, Amanda Griffiths, Tom Cox

Maintaining balance within the workplace: assessing the subjective well-being of women who work.

Roxane Gervais, Prudence Milllear

Balancing work, parent and spouse roles in Fly-In, Fly-Out (FIFO) Couples

Danielle Giffin, Prudence Milllear

Working hours

15:45 - 17:15

MAL 415, Birkbeck

Chair: Wilmar Schaufeli

The mediating role of cognitive appraisal in the work intensification - strain relationship. Does participation buffer the negative effects?

Matea Paškvan, Bettina Kubicek, Roman Prem, Christian Korunka

12 hour or 8 hour shifts: effects on perceived fatigue and burnout by health care providers in hospital

Sandrine Schoenenberger, Daniel Gilibert, Ingrid Banovic

Are my co-workers' breaks associated with my psychological distress? A multilevel study among hospital patient-care workers.

David Hurtado, Maria Glymour, Silje Reme, Lisa Berkman, Glorian Sorensen

What is fatigue? A call for consensus based on learning from past definitions

Ross Owen Phillips

Do high job demands lead to the development of workaholic tendencies? Evidence from a longitudinal investigation.

Cristian Balducci, Lorenzo Avanzi, Franco Fraccaroli

Stuck in an endless present: workplace boredom and its correlates

Lotta Harju, Jari Hakanen, Wilmar Schaufeli

Antecedents of work-related stress and well-being I

15:45 - 17:15

MAL 417, Birkbeck

Chair: Despoina Xanthopoulou

Is outcome responsibility at work emotionally exhausting? Investigating personal initiative as a moderator

Antje Schmitt, Deanne N. Den Hartog, Frank D. Belschak

Childhood experiences and well-being in UK trainee clinical psychologists: A mixed methods analysis

John Galvin, Andy Smith

Job Control, task-related stressors, and social stressors: identifying groups with different developmental patterns in these variables, and predicting psychological and physical well-being by group membership

Ivana Iqic, Norbert Semmer, Anita Keller, Achim Elfering, Wolfgang Kälin, Franziska Tschan

Illegitimate tasks and sleep quality: an ambulatory study

Diana Romano, Norbert K. Semmer, Achim Elfering

Stress and wellbeing at work: An update

Andy Smith

Rewarding salary: application of the effort-reward imbalance model

Beata Basinska, Izabela Wiciak

Break

17:15 - 17:30

Symposium: Healthy workplaces and healthy workers: The impact of organizational initiatives

17:30 - 18:30 **Beveridge Hall, Senate House** Chair: **Arla Day**

Healthy workplaces and healthy workers: the impact of organizational initiatives

Arla Day

The effects of organizational factors and healthy practices on employee well-being, burnout, and engagement

Arla Day, Lori Francis, Nikola Hartling

The importance of employee engagement in workplace interventions

Samantha Penney, Arla Day

Engaging your employees: the power of recognition

Jennifer Dimoff, Kevin Kelloway, Laure Pitfield

Workplace intervention & health

Karin Villaume, Dan Hasson

Symposium: Occupational e-mental health: an effective and promising route to foster health and well-being in stressed employees? Part 2

17:30 - 18:30 **Deller Hall, Senate House** Chair: **Dirk Lehr**

Occupational e-mental health: an effective and promising route to foster health and well-being in stressed employees? Part 2

Dirk Lehr, David Ebert

Happy@work: (cost-)effectiveness of a preventive web-based guided self-help course for employees with depressive symptoms

Anna Geraedts, Noortje Wiezer, Annet Kleiboer, Pim Cuijpers, Willem van Mechelen

Internet-based prevention of depression in employees. A randomized controlled trial

David Ebert, Dirk Lehr, Leif Boß, Heleen Riper, Pim Cuijpers, Hanne Thiar, Matthias Berking

Efficacy and cost-effectiveness of a web-based stress-management training in employees: preliminary results of a randomized controlled trial

Elena Heber, Dirk Lehr, David Ebert, Stephanie Nobis, Matthias Berking, Heleen Riper

Symposium: Relationships of work demands, depression and burnout to cognitive processes and their neuronal correlates

17:30 - 18:30 **MAL 414, Birkbeck** Chair: **Gabriele Freude**

Relationships of work demands, depression and burnout to cognitive processes and their neuronal correlates

Gabriele Freude, Peter Martus, Guy Potter, Sylvia Boden

Work related predictors of burnout and depressive symptoms

Peter Martus, Uwe Rose, Olga Jakob, Guy Potter, Michael Falkenstein, Gabriele Freude

Does task-switching ability moderate the association between workload demands and mental health?

Guy Potter, Kathleen Hayden, Michael Falkenstein, Peter Martus, Eberhard Pech, Uwe Rose, Gabriele Freude

Work-related psychomental load: effects on brain electrical correlates of information processing

Sylvia Boden, Michael Falkenstein, Rita Willemssen

Psychometrics II

17:30 - 18:30 **MAL 415, Birkbeck**

Chair: Birgit Greiner

'Balancing out' the management standards risk model: associations between the Irish management standards indicator tool and the WHO-Five Well-being Index

Suzanne Boyd, Robert Kerr, Jonathan Houdmont, Patricia Murray

Work-based learning: development and validation of a scale measuring the learning potential of the workplace (LPW)

Irina Nikolova, Joris Van Ruysseveldt, Hans De Witte, Karen van Dam, Jef Syroit

Evaluating the psychometric properties of two tools for measuring work-related stress risk

Matteo Ronchetti, Benedetta Persechino, Antonia Ballottin, Cristina Di Tecco, Simone Russo, Tiziana Castaldi, Sergio Iavicoli

Time lags in panel studies on psychosocial factors and stressor-strain relationships at work

Bart Van de Ven, Christian Dormann

Work-Life Balance III

17:30 - 18:30 **MAL 416, Birkbeck**

Chair: Nele De Cuyper

The role of work-nonwork boundary management in work stress recovery

Ulla Kinnunen, Johanna Rantanen

The role of employees' parents in work-family balance: a study with taiwanese employees

Chih-Ying Wu, Amanda Griffiths, Thomas Cox

Predictors of work-family conflict and enrichment: an individual and dyadic exploration

Joana M. Vieira, Marisa Matias, Frederick G. Lopez, Paula M. Matos

Attachment and work-family dynamics in dual-earner couples: does career role orientation mediate this relation?

Marisa Matias, Joana Marina Vieira, Paula Mena Matos

Emotions and work

17:30 - 18:30 **MAL 417, Birkbeck**

Chair: Mark Cropley

The importance of supervisor emotion regulation in the provision of effective social support: implications for employee strain

Michelle Tucker, Nerina Jimmieson

To investigate if emotional labour, organisational variables and wellbeing predict tenure in the service industry

Alia Al Serkal

Early maladaptive schemas and work-family conflict: a moderated mediation of the relationship between occupational role stressors and emotional exhaustion in spanish salespeople

Gema Ruiz de Huydobro, Leire Gartzia

Workflow interruptions, cognitive failure and near-accidents in health care

Achim Elfering, Simone Grebner, Corinne Ebener

EAOHP Conference Dinner

19:00

Westminster Palace, UK Parliament

16 April 2014

Registration

8:00 - 8:30 **Crush Hall, Senate House**

Symposium: Contextualizing the job demands-resources model

8:30 - 9:45 **Beveridge Hall, Senate House** **Chair: Karina Van de Voorde**

Contextualizing the job demands-resources model
Karina Van De Voorde, Marc Van Veldhoven

Job demands, job control, and employee outcomes: the moderating effect of the psychological climate
Stephen Wood, George Michaelides, Maria Karanika-Murray

Strategic human resource management and the job demands-resources model
Marc Van Veldhoven, Karina Van De Voorde, Monique Veld

Utilizing the JDR model to develop tailored questionnaires to measure working conditions
Johan Simonsen Abildgaard, Karina Nielsen, Kevin Daniels

The job demands-resources model: a simple representation of the complex reality?
Evangelia Demerouti, Arnold B. Bakker

Symposium: Status quo and issues of burnout studies in Korea with samples for students, counsellors, and soldiers

8:30 - 9:45 **Deller Hall, Senate House** **Chair: Hyunju Choi**

Status quo and issues of burnout studies in Korea with samples for students, counsellors, and soldiers
Hyunju Choi, Eunbi Chang, Min Hee Cho, Jayoung Lee, San Min Lee

Longitudinal model of academic burnout among Korean middle school students applying latent profile analysis
Eunbi Chang, Hyunju Choi, Sang Min Lee

Differentiated interaction effects depending on the level of counsellor burnout
Hyunju Choi, San Min Lee

Qualitative research of burnout experience among non-commissioned soldiers
Min Hee Cho, Hyunju Choi, Jayoung Lee

Mindfulness

8:30 - 9:45 **MAL 414, Birkbeck** **Chair: Aileen M. Pidgeon**

Evaluating the effectiveness of enhancing resilience in human service professionals using a retreat-based Mindfulness with Metta Training Program: A randomised control trial
Aileen Pidgeon, Lucas Ford

Mindfulness, emotional labor and daily well-being: a diary study
Stefan Diestel, Klaus-Helmut Schmidt

Assessing the efficacy of a 4-week Internet-based mindfulness intervention to reduce work-related rumination and fatigue: A waitlist control study.
Dawn Querstret, Mark Cropley

Evaluating the effectiveness of mindfulness-based resilience skills training for human service professionals: A randomized control trial of the MARST program
Aileen Pidgeon, Andrew Hanna, Breeana O'Brien, Frances Klaassen

On psychosocial resources across domains: the case for paid work and volunteering
Romualdo Ramos, Rebecca Brauchli, Georg Bauer, Theo Wehner

Focus on Occupational groups II

8:30 - 9:45

MAL 415, Birkbeck

Chair: Jennifer Lunt

Cooperative or uncooperative patients: factor of variations in activity of health care providers in two French emergency wards

Sandrine Schoenenberger, Pierre Moulin, Eric Brangier

Does career development predict personal goals at work? A six-year, four-wave follow-up study among young Finnish managers.

Katriina Hyvönen, Eija Räikkönen, Taru Feldt, Saija Mauno

Work pressure and sickness absence among primary school teachers: the relation of time spent working during and after working hours

Tinka van Vuuren, Judith Semeijn

A management approach to prevent work related stress among health care workers

Gabriele d'Ettorre, Chiara Maselli, MariaRita Greco

Quality of work life among obstetric nurses in urban Northeastern Ontario: a population-based cross-sectional study

Behdin Nowrouzi, Nancy Lightfoot, Lorraine Carter, Michel Larivière, Ellen Rukholm, Robert Schinke, Diane Belanger-Gardner

Physical Health and Work

8:30 - 9:45

MAL 416, Birkbeck

Chair: Kirsi Ahola

Depression and cardiorespiratory fitness: a meta-analysis

Theodoros Papasavvas, Mohammad Al-Hashemi, Dominic Micklewright

Psychosocial work factors and upper limb disorders: Systematically ruling out other work-related and non-work-related alternative explanations

Birgit Greiner, Dervla Hogan, Sheilah Nolan

Determinants of workers mental health: results from the SALVEO study

Alain Marchand, Pierre Durand, Andrée Demers, Victor Haines, Steve Harvey, Sonia Lupien, Vincent Rousseau

Psychological and social work factors as predictors of mental distress and positive affect: a prospective study

Live Bakke Finne, Stein Knardahl

Counterproductive behaviour at work

8:30 - 9:45

MAL 417, Birkbeck

Chair: Roxane Gervais

Patient aggression in healthcare contexts: what kind of resources do physicians and nurses need?

Daniela Converso, Silvia Gilardi, Chiara Guglielmetti, Sara Viotti

Counterproductive work behaviours in the context of demand-control-support model: the indirect effects of job demands are mediated by job burnout and moderated by job control and social support

Lukasz Baka, Ewelina Smoktunowicz, Roman Cieslak

Violence in the workplace: establishing a framework model of understanding and action - application in an urban transport company

Marc Favaro, Jacques Marc

Linking customer sovereignty to employee strain: the mediating roles of experienced customer aggression and perceived organizational support

Aaron Schat, Camilla Holmvall, Sonya Stevens

Break

9:45 - 10:00

Symposium: Studies of worker well-being: impacts of positive and negative experiences at work

10:00 - 11:30 Beveridge Hall, Senate House Chair: **Eva Garrosa**

Studies of worker well-being: impacts of positive and negative experiences at work
Eva Garrosa

The effect of psychological detachment from work on well-being and life satisfaction: a longitudinal study

Bernardo Moreno-Jiménez, Macarena Gálvez-Herrer, Alfredo Rodríguez, Aldo Aguirre-Camacho

Sleep well and prosper: effects of resources on daily engagement and recovery
Eugenia McGrath, Helena Cooper-Thomas, Eva Garrosa

Eudaemonic well-being fluctuations by previous day experiences

Raquel Rodríguez-Carvajal, Marta Herrero, Sara de Rivas, Carlos García-Rubio, David Paniagua

The role of recovery in the relationship of workplace incivility, verbal abuse and their impact on daily emotional well-being

Eva Garrosa, Isabel Carmona, Luis Manuel Blanco, Elena del Barrio

Assessing workload, strain and resources in the organization - an integrated perspective
Paul Jiménez, Anita Dunkl, Wolfgang K. Kallus

Symposium: Building and restoring resources at work: intervention success and boundary conditions

10:00 - 11:30 Deller Hall, Senate House Chair: **M. Gloria González-Morales**

Building and restoring resources at work: intervention success and boundary conditions
M. Gloria González-Morales, Anna Steidle

Day level positive thinking intervention to promote positive emotions and vigour among administrative staff.

Annekatriin Hoppe, Alexandra Michel

Energizing respites from work: daily savouring of nature and relaxation interventions promote vigour.

Anna Steidle

The role of daily resource-based exercises at work in buffering daily depletion and boosting initial resources.

Deirdre O'Shea, M. Gloria González-Morales

Benefits of mindfulness for work-life-balance: results of an intervention study.

Alexandra Michel, Christine Bosch, Miriam Rexroth

Building resources for the transition into retirement and beyond: a group-coaching intervention for retirees-to-be.

Nadine Seiferling, Alexandra Michel

Symposium: New research trends on proactivity at work

10:00 - 11:30

MAL 414, Birkbeck

Chair: Despoina Xanthopoulou

New research trends on proactivity at work

Despoina Xanthopoulou, Ana Isabel Sanz-Vergel, Evangelia Demerouti

Building strengths or improving weaknesses: that is the question

Wido G.M. Oerlemans, Marianne van Woerkom, Arnold B. Bakker

Job crafting and flow at work and after work: A diary study on the role of cognitive weariness

Despoina Xanthopoulou

When job crafting relates negatively to the well-being of colleagues

Maria Tims, Arnold B. Bakker, Daantje Derks

When colleagues imitate job crafting behaviours: Implications for work engagement

Ana Isabel Sanz-Vergel, Arnold B. Bakker, Alfredo Rodríguez-Muñoz

An examination into the proactive crafting of their jobs by employees who work across organizational boundaries

Rachel Nayani, Kevin Daniels

Organisational change II

10:00 - 11:30

MAL 416, Birkbeck

Chair: Karina Nielsen

The validity of a multifaceted measure of experiences of organisational change

Raymond Randall, Jonathan Houdmont, Robert Kerr, Kelly Wilson, Ken Adley

Error management in health organizations: how high reliability organizations may implement organizational performance adopting a generating view of errors

Maria Luisa Farnese

The relationship between dispositional resistance to change and emotional exhaustion: effects of transformational leadership from a team-level perspective

Sarah Turgut, Alexandra Michel, Karlheinz Sonntag

Healthy organizations in Sweden: positive organizational factors in the public and the private sector

Åsa Stöllman, Magnus Svartengren, Tomas Eriksson, Ulrich Stoetzer, Marianne Parmsund, Eva Vingård

How are they now? Managers' well-being and organizational attitudes after restructuring of their job positions in a Swedish governmental agency

Claudia Bernhard-Oettel, Johanna Stengård, Katharina Näswall

Organisational interventions to improve wellbeing: a comparison of change processes in different work cultures.

Virginie Althaus, Vincent Grosjean, Eric Brangier, Nadja Formet

Absenteeism and presenteeism

10:00 - 11:30

MAL 417, Birkbeck

Chair: Angeli Santos

Work-related psychosocial risk factors for long term sick leave: A prospective study of the general working population in Norway

Cecilie Aagestad, Håkon Johanessen, Tore Tynes, Hans Magne Gravseth, Tom Sterud

Time lost versus frequency measures of absenteeism: does one really reflect health and the other work attitudes?

Gary Johns, Raghid Al Hajj

Sickness absence in the workplace and gender differences

Elvira Micali, Concettina Fenga

Is sickness presenteeism a risk factor for depression? A two-year follow-up study of Danish workers

Paul Maurice Conway, Annie Høgh, Ase Marie Hansen

Presenteeism as a catalyst of burnout consequences: Effects on health and performance

Chiara Consiglio, Guido Alessandri

The role of personality and trait emotional intelligence on performance and facet-specific job satisfaction among sales personnel in the Malaysian banking industry

Angeli Santos, Ren Chang Soo

Break

11:30 - 11:45

EAOHP Fellowship Keynote Address: Job demands and job resources: Given and crafted

11:45 - 12:30 **Beveridge Hall, Senate House**

Job demands and job resources: Given and crafted

Evangelia Demerouti

Lunch and Poster Session

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Poster session: Employee motivation, satisfaction, and performance

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Psychosocial job characteristics, coping and mental health among Swedish police officers in relation to deportation work with unaccompanied children

Jonas Hansson, Malin Eklund Wimelius, Lars-Erik Lauritz, Anna-Karin Hurtig, Mehdi Ghazinour

Psychosocial job characteristics, coping and mental health among Swedish social workers in relation to the work with repatriation of unaccompanied children

Johanna Sundqvist, Anna-Karin Hurtig, Mojgan Padyab, Kenneth Ögren, Mehdi Ghazinour

Organizational climate and job satisfaction in plastic shoe workers in Guadalajara, Mexico

Maria de Lourdes Preciado Serrano, Rogelio Vicente Gomez Sanchez, Juan Manuel Vasquez Goñi

Engagement and health in worklife: the role of values and justice

João Paulo Pereira, Santiago Gascon, Maria João Cunha, João Maria Pereira

A preliminary study investigating the relationship between work engagement, job satisfaction, emotional dissonance, and wellbeing in high potential employees.

Alia Al Serkal

A longitudinal study of work commitment in student nurses

Andrew Clements

Poster session: Employee retention and sickness absence

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Predictors and consequences of presenteeism: A qualitative study of nurses in geriatric settings

Luke Anthony Fiorini, Amanda Griffiths, Jonathan Houdmont

Identifying return to work predictors among individuals obtaining psychological services
Caleb Leduc, Michel Larivière, Zsuzsanna Kerekes, Danielle Valcheff

Towards a greater understanding of the influence of psychopathology, personality and treatment factors in the return to work process for employees absent from the workplace
Danielle Valcheff, Michel Larivière, Caleb Leduc

Employee turnover intention and leader-member exchange: a multilevel investigation
Igor Portoghese, Maura Galletta, Michael P Leiter, Adalgisa Battistelli

Poster session: Working conditions and health

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Job informality and psychological distress in Colombia
David Hurtado

Patterns of psychosocial working conditions as predictors of public sector manager's sustainability: a two year follow up
Linda Corin, Erik Berntson, Annika Härenstam

Perceived stress and biomarkers in medical residents
Ambar Deschamps Perdomo, Maria Teresa del Campo Balsa, Kelman Luis de la Rosa Zabala, Ignacio Mahillo

Protection of worker with disability: reasonable accommodations
Benedetta Persechino, Patrizia Laurano, Grazia Fortuna, Antonio Valenti, Sergio Iavicoli

Poster session: Organizational and psychosocial interventions and outcomes

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Interventions in academia - supporting and challenging factors
Christine Ipsen, Vibeke Andersen, Mirjam Godskesen

An evaluation of a sun safety intervention for the UK construction sector using the transtheoretical model of behaviour change
Paul Madgwick, Jonathan Houdmont

Using visualization objects to secure employee commitment and measure intervention progress
Liv Gish, Signe Poulsen, Christine Ipsen

Treatment of food cravings in overweight and obese adults: a comparison of emotional freedom techniques and cognitive behavioural therapy with 6-month follow-up
Peta Stapleton, Brett Porter, Terri Shledon

Prevalence, determinants and interventions to prevent sickness presenteeism among physicians in academic medicine: The European HOUPE study and the Nordic NOS-HS study
Lise Løvseth, Per Øystein Saksvik, the HOUPE study group, the NOS-HS study group

Evaluation of a training for health oriented leadership: a longitudinal analysis
Rebecca Pauly¹, Viktoria Arling², Jessica Lang¹

Reducing work related stress: a randomized controlled trial (RCT)
David Glasscock, Ligaya Dalgaard, Ole Carstensen

Improving organizational prerequisites for public sector managers – a follow-up study with long-term effects
Erik Berntson, Annika Härenstam, Hans Lindgren, Anders Pousette, Stefan Szücs

Poster session: Measurement and tools in occupational health psychology

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Development of a screening tool for predicting non-specific neck pain in office workers: A 1-year prospective cohort study

Arpalak Paksachol, Prawit Janwantanakul, Praneet Pensri

Assessing the risk of occupational injury, illness, & disability: Creating a meta-analytically informed instrument for lost-time injury prediction in nurses

Basem Gohar, Michel Larivière, Nancy Lightfoot, Céline Boudreau-Larivière, Caleb Leduc, Behdin Nowrouzi

Effects of work activity on cognitive aging: the case of interpreters

Sébastien Henrard, Agnès Van Daele

Using the occupational stress inventory- revised in assessing occupational health and wellbeing among employees: reporting the results of several Australian studies and their implications for practitioner use

Richard Hicks

Adapting the management standards approach in the republic of Ireland: validation of the Irish version of the management standards indicator tool

Suzanne Boyd, Robert Kerr, Patricia Murray, Jonathan Houdmont

Construct validity of the SBI-PD in a Mexican blue-collar workers

Anabel Camacho-Ávila, Pedro Gil-Monte, Arturo Juárez-García, Leonardo Horacio Noriega-Medina

The work design questionnaire: validation of a French and Dutch version

Bart Van de Ven, Bert Weijters

Poster session: Mental and physical health and the workplace

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Workstyle and musculoskeletal problems in white watteraft guides

Hilary McDermott, Iain Wilson, Fehmidah Munir

Physical and psychological determinants of workplace injuries: a study of forest firefighters in Ontario, Canada

Michel Larivière, Caleb Leduc, Hilary Gordon

Work and ambulatory blood pressure

Vera JC Mc Carthy, Ivan J Perry, Birgit A Greiner

Quality of life and job satisfaction: Multicultural perspective

Maria João Cunha, Joao Paulo Pereira, João Maria Pereira

The customer as psychosocial work environment, a person-centred Methodological Approach

Erik Lundkvist, Ingrid Schéle

Ageing workforce in the educational sector: an exploratory study

Gloria Guidetti, Sara Viotti, Marco Ferrara, Valentina Trotta, Daniela Converso

Cultural activities at work as a form of mental recovery and organizational health

Camilla Kylin

Poster session: Workplace violence, bullying and harassment

12:30 - 14:00 **Macmillan Hall & Beveridge Hall, Senate House**

Individual and situational factors as risks and deterrents of perceived exposure to workplace bullying

Milda Astrauskaite, Roy Max Kern, Guy Notelaers

The moderating role of socioeconomic status in the relationship between exposure to interpersonal conflicts at work and psychological distress: exploration of gender differences

Nathalie Lanctot, Aline Drapeau, Stephane Guay

Does emotional suppression moderate the effects of aggression at work on counterproductive work behaviours?

Lukasz Baka, Dorota Szczygiel, Roza Bazinska

Disturbing the existing power structure: adding the clinical nurse leader role to the nursing hierarchy

Lisle Hites, Jessica Wakelee

Retaliation and displacement of aggression towards customers: The moderating role of emotional labour

Nicole Wilson, Michelle Inness

ICG-OHP Meeting (by invitation only)

12:45 - 13:45 **Deller Hall, Senate House**

Antecedents of work-related stress and well-being II

14:00 - 15:30 **Beveridge Hall, Senate House** **Chair: Peter Kelly**

Perceptions of work-related stress risk: The integrated role of socio-demographic and occupational variables

Alessandro Marinaccio, Pierpaolo Ferrante, Marisa Corfiati, Cristina Di Tecco, Bruna Maria Rondinone, Michela Bonafede, Matteo Ronchetti, Benedetta Persechino, Sergio Iavicoli

Differential relations between challenge and hindrance stressors and work-related attitudes: the mediating role of work-related affect

Barbara Stiglbauer, Bernad Batinic

Challenge stressors: longitudinal effects on self attitudes, work attitudes, and health

Pascale S. Widmer, Anita C. Keller, Dianne H. Gardner, Norbert K. Semmer

Employee understandings of social support and the implications for theory and practice: Insights from a UK case study

Tina Kowalski

Appraising teamwork: the role of coordination in predicting appraisals of threat and challenge

Clark Calabrese, Megan Dove-Steinkamp

Work and health I

14:00 - 15:30 **Deller Hall, Senate House** **Chair: Jonathan Houdmont**

An experimental investigation of the job demand-control model with measures of salivary alpha amylase and continuously recorded heart rate variability.

Bradley Wright, Emma O'Donnell, Kathleen Landolt

A psychophysiological explanation of diminished performance Under mental fatigue

Jesper F. Hopstaken, Dimitri van der Linden, Arnold B. Bakker, Michiel A. J. Kompier

Job strain, cognitive decline, and apoe4 genotype: a prospective study of the framingham offspring

Wilfred Agbenyikey, Robert Karasek

Cognitive impairments in outpatients with perceived work-related stress
Anita Eskildsen, Lars Peter Andersen, Anders Degn Pedersen, Sanne Kjær Vandborg, Johan Hviid Andersen

Developmental trajectories of multi-site pain and depression - the effects of job demands, job resources and individual factors

Auli Airila, Jari Hakanen, Ritva Luukkonen, Sirpa Lusa, Anne Punakallio, Päivi Leino-Arjas

Hell is other people: how gender and type of interactions with strangers influence a persons' risk for depression in different occupations

Sebastian Fischer, Anita Wiemer, Laura Diedrich, Wulf Rössler

Interventions

14:00 - 15:30

MAL 414, Birkbeck

Chair: Norbert Semmer

The effectiveness of manual handling training on knowledge transfer to employees, behavioural change and, subsequent, reduction of work-related musculoskeletal disorders: a systematic review.

Dervla Hogan, Birgit Greiner, Leonard O'Sullivan

Job burnout interventions: taking a 'realist' review of the evidence

Anthony Montgomery, Karolina Doulougeri, Katerina Georganta, Efharis Panagopoulou

Impact of communication within the surgical team on surgical site infections: integrating content, time, and tasks

Norbert K. Semmer, Franziska Tschan, Julia Seelandt, Sandra Keller, Anita Kurmann, Daniel Candinas, Guido Beldi

Brief motivational interviewing for healthy eating and physical activity training for health and community staff

Peta Stapleton, Elizabeth Scott

RISE@Work: the development and piloting of a web-based workplace intervention for reducing sitting everyday

Jason Lacombe, Linda Trinh, Subha Ramanathan, Tanya Scarapicchia, Kelly Arbour-Nicitopoulos, Guy Faulkner

Resources at work I

14:00 - 15:30

MAL 415, Birkbeck

Chair: Hazel Ramos

Employee resilience and work-related factors: scale development and some interesting associations

Katharina Naswall, Joana Kuntz, Sanna Malinen

Energy management during the workday, work engagement and performance

Liljaana Lähteenkorva, Jessica de Bloom, Ulla Kinnunen, Kalevi Korpela

Crossover effect of optimism in the context of the job demands-resources model

Ewelina Smoktunowicz, Roman Cieslak

can job crafting increase employee work-life balance and well-being?

Verena C. Hahn, Anna-Laura Schmitz

Coworkership as a collective process: focus group interviews with employees in a Swedish healthcare organisation

Caroline Bergman, Jesper Löve, Annemarie Hultberg, Katrin Skagert

Work environment, health promotion and well being the role of positive occupational health psychology

Maria João Cunha, João Paulo Pereira, Santiago Gascón

Resources at work II

14:00 - 15:30

MAL 416, Birkbeck

Chair: Sheena Johnson

Stress, conflict and psychological distress in the working population: What is the role of positive mental health?

Kathryn Page, Allison Milner, Angela Martin, Tony LaMontagne

Differentiation of self in the workplace and its relation to work stress and work satisfaction.

Alan Cavaiola, Callandra Peters

Social context and resilience as multilevel predictors of job satisfaction and performance: A longitudinal study

Isabella Meneghel, Laura Borgogni, Mariella Miraglia, Marisa Salanova, Isabel M^a Martínez

Where did the work go? Assessing the psychosocial work environment as a work flow process

Liv Starheim

Developing reflexive learning in occupational health psychology: the use of reflective journal - a case study in higher education

Andreina Bruno

The social aspect in coworking spaces: social support helps when times are hard

Cornelia Gerdenitsch, Julia Andorfer, Tabea Scheel, Christian Korunka

Work engagement

14:00 - 15:30

MAL 417, Birkbeck

Chair: Victor M. Catano

The integration of leadership into the job demands-resources model

Wilmar Schaufeli

Daily self-management and employee engagement

Kimberley Breevaart, Arnold Bakker

The use of behaviours to assess supportive managers, and its influence on subordinate engagement, job satisfaction and turnover intention

Kevin Teoh, Iain Coyne

Predictors and outcomes of engagement among university students: the moderating effect of age

Victor Catano, Soo Sutherland

What does workload really mean for executives: an exploratory Analysis

Hazem Ben Aissa, Narjes Sassi

Standardising behaviour change in health and safety: a way forward?

Jennifer Lunt, Nikki Bell, Jane Hopkinson, Victoria Bennett

Break

15:30 - 15:40

Antecedents of work-related stress and well-being III

15:40 - 17:10

Beveridge Hall, Senate House

Chair: Michelle Tuckey

high performance as a double-edged sword

Luc Bourgeois, Andrew Neal, Hannes Zacher

Factors associated with job lock in a national survey of older workers in the U.S.

James Grosch

Effectiveness of comprehensive stress management program to reduce work related stress in medium sized enterprise

Chunhui Suh, Shin-Ae Kim, Mi-Hee Park, Kunhyung Kim, Chae Kwan Lee, Byung Chul Son, Jeong Ho Kim, Jong Tae Lee, Kuck-Hyun Woo, Kabsoon Kang, Hyunjin Jung

Impact of development of job control and task-related stressors on resigned job attitude

Anita Keller, Norbert Semmer, Franziska Tschan, Wolfgang Kälin, Achim Elfering

Identifying objective work activities and work contexts associated with workplace bullying

Michelle Tuckey, Sarven McLinton, Peter Chen, Maureen Dollard, Yiqiong Li, Annabelle Neall

Work and Health II

15:40 - 17:10

Deller Hall, Senate House

Chair: Peter Kelly

Impaired sleep and psychological tension as a stress indicator

Jesper Kristiansen, Sannie Vester Thorsen, Andreas Friis Elrond, Malene Friis Andersen, Pernille Uhrskov Hjarsbech, Roger Persson, Anne Helene Garde, Vilhelm Borg, Reiner Rugulies

Implicit and explicit risk in obesity and unhealthy eating

Tony McCarthy, Calvin Burns

Cancer survivorship and sustainable working life

Thomas Cox, Sara MacLennan, Sarah Scott

Job demands and the metabolic syndrome: which role do negative affective states and occupational, personal and behavioural resources play?

Ofer Atad, Sharon Toker

Health promotion targets in Austria from a public health view

Guido Offermanns

Challenges and interventions

15:40 - 17:10

MAL 414, Birkbeck

Chair: Kirsi Ahola

Burnout and depression develop together: a study using the person-centred approach

Kirsi Ahola, Jari Hakanen, Riku Perhoniemi, Pertti Mutanen

Psychosocial work-place stressors and occupational injuries: a longitudinal study of the general working population in Norway

Håkon A. Johannessen, Hans-Magne Gravseth, Tom Sterud

An exploratory bi-factor analysis of work-related well-being: Work engagement and burnout

Leon de Beer, Jaco Pienaar, Sebastiaan Rothmann Jr.

Acceptance of smartphone-based applications (apps) in occupational health projects: the view of German and Austrian leaders

Anita Dunkl, Paul Jiménez

Promoting balance at work and employee health through a worksite based participatory intervention

Petra Lindfors, Eva Charlotta Nylén, Sara Göransson, Lars Ishäll, Gunnar Aronsson, Magnus Sverke

The role of personality traits in the process of recovering from work

Leif W Rydstedt, Mark C Cropley, Jason Devereux

Other Issues in OHP

15:40 - 17:10

MAL 415, Birkbeck

Chair: **Cristina Di Tecco**

A bunch of stress - on the relationship between supervisors' transformational leadership behaviour and followers' hair cortisol levels

Mathias Diebig

The financial cost of work-related stress and psychosocial risks to society: a systematic review of the evidence

Juliet Hassard, Kevin Teoh, Malgorzata Milczarek, Philip Dewe, Tom Cox

Causal pathways between perceived employability and turnover intention: the mediating role of well-being

Dorien Vanhercke, Nele De Cuyper, Hans De Witte

Incremental variance of core self-evaluation and perceived employability compared to job resources in health and turnover intention

Delia Virga, Eva Cifre Gallego

Safety culture and climate II

15:40 - 17:10

MAL 416, Birkbeck

Chair: **Sheena Johnson**

Goal orientation and safety climate: compensatory versus enhancing mechanisms for safety behaviour?

Anat Drach-Zahavy, Anit Somech

Perceived stress and post traumatic reaction of workers after the bank robbery

Marija Molan

Identifying different coordination requirements in medical teams using a hierarchical task analysis

Jan Schmutz, Tanja Manser

Interpersonal influences and young adults' risk-taking behaviours at work

Simon Pek, Sean Tucker, Nick Turner, E. Kevin Kelloway, Jayne Moorish

Work-Life Balance IV

15:40 - 17:10

MAL 417, Birkbeck

Chair: **Scott Schieman**

The role of emotion regulation in the crossover process

Angela Neff, Sabine Sonnentag, Cornelia Niessen, Dana Unger

A new form of organizational stress intervention – considering the spillover of stress from work to home and vice versa

Corina A. Merz, Fridtjof W. Nussbeck, Guy Bodenmann

“The needy institution” work contact outside of regular working hours

Scott Schieman, Paul Glavin

Work-life balance and effectiveness in family-friendly companies

Marina Romeo, Rita Berger, Montserrat Yepes-Baldo, Luis Torres

Better safe than sorry? The benefits of job security in relation to regulatory focus and age

Veerle Brenninkmeijer, Anique van Lent

Spillover and crossover of work-related negative affect among dual-earner couples: The moderating role of self-control strength

Christian Dormann, Stanley Friedemann, Zhaoli Song, Verena Hahn

Closing Session

17:10 - 17:30

Beveridge Hall, Senate House



**KEYNOTE
PRESENTATIONS**

OHP 'Keynote' Debate: Looking at the past, planning for the future of OHP

Robert Karasek^{1,2} and Johannes Siegrist³

¹Department of Work Environment, University of Massachusetts Lowell, USA, ²Institute for Psychology, Copenhagen University, Denmark, ³Heinrich-Heine University Dusseldorf, Germany



Robert Karasek, PhD, holds degrees in sociology and labourrelations, civil engineering and architecture. He is a specialist in the psychosocial aspects of work and work redesign processes. Having served on the faculty of the Department of Industrial Engineering at Columbia University, he is professor in the Department of Work Environment at the University of Massachusetts Lowell, United States, and emeritus professor at the Department of Psychology, Copenhagen University. Professor Karasek is the author of the Demand/Control model of work organization effects on health and learning, and author of psychosocial job stress questionnaire (JCQ) used in studies of stress and heart disease, MSD, and mental strain all over the world. He has published many peer-reviewed articles,

primarily on work organization, job stress and cardiovascular disease, is co-author of the often-utilized book, *Healthy Work*, and has received an American Psychological Association Lifetime Career Achievement Award for his work. He is Director of Øresund Synergy, a work organization competency pool in Denmark and Southern Sweden.

Johannes Siegrist received his PhD in sociology at the University of Freiburg, Germany. He holds several positions as Professor of Medical Sociology, most importantly at the University of Dusseldorf, Germany, where he directed the respective department from 1992 to 2012. He was recently awarded a Senior Professorship for Work Stress Research at this University. His longstanding main research interests focus on health-adverse psychosocial work environments and the role of work in explaining health inequalities. Together with his team he developed and tested the effort-reward imbalance model of work stress which is currently being further developed. Johannes Siegrist was President of the International Society of Behavioural Medicine and of the European Society of Health and Medical Sociology, among others. He received several national and international distinctions and is a Fellow of the European Academy of Occupational Health Psychology.



Abstract:

It is the aim of this debate to discuss the current state and future promising directions of research on work stress and health with a focus on the two theoretical models developed by the proponents. We will address some current challenges in applying and interpreting the models and their health-related results with special emphasis on some influential and controversial recent publications on job stress and heart disease. Furthermore, new directions of research will be discussed with a view on how these core theoretical notions can be transferred into innovative scientific projects. In the case of the demand-control model, these notions concern active work, competence development, and the integration of regulatory mechanisms at different levels (physiological, personal, social). In the case of the effort-reward imbalance model, these notions concern reciprocity and fairness of social exchange and the links between personal need satisfaction (especially recognition) and the social opportunity structure.

Work & Stress – Routledge Keynote Address: The UK Management Standards: Looking Forwards, Looking Back

Tom Cox

*Director, Centre for Sustainable Working Life, Birkbeck University of London, UK,
Co-director, Metis Collaboration, University of Aberdeen, UK*

In 2012, after retiring as the Founding Director of the Institute of Work, Health & Organisations, University of Nottingham, Tom was appointed to the Chair of Occupational Health Psychology & Management at Birkbeck University of London. His challenge was to build a new research centre in the School of Business, Economics and Informatics: the Centre for Sustainable Working Life. The Centre was formally established by the College and launched in June 2013: He is its first Director.

Tom is a chartered psychologist and a full member of the Divisions of Occupational Psychology and Health Psychology of the British Psychological Society. He specialises in occupational health and in safety management. In 2000, he was awarded a CBE for his services to occupational health. He holds Honorary Fellowships of the Faculty of Occupational Medicine, Royal College of Physicians of Ireland and of the Institute of Ergonomics and Human Factors. In 2008, He was presented with an award for a Distinguished Contribution to Occupational Health Psychology jointly by the American



Psychological Association, the US National Institute for Occupational Safety and Health and the US Society for Occupational Health Psychology. In 2011, he was awarded an Honorary Chair in Psychosocial Oncology at the University of Aberdeen where he is involved in the management of the METIS Collaboration which is focused on cancer survivorship and working life. He also holds an Emeritus Chair in Organizational Psychology at the University of Nottingham.

For the last 40 years, Tom's research has variously concerned the relationships among the nature and management of working conditions, the psychophysiology of work-related stress, and employee health and safety. Within this broad area, he has been particularly interested in the application of risk management strategies in the prevention of ill health through work and, more positively, in the promotion of work-related healthiness. His work informed the GB Health & Safety Executive's Management Standards and has contributed to the development of the concept of psychosocial and organizational risk to employee health and of systems and procedures for their management. Most recently, Tom has become involved in issues relating to the sustainability of working life, and, within this area, those relating to cancer survivorship particularly among older employees. His interest in sustainability is expressed through the new centre at Birkbeck University of London while that in cancer survivorship has spurred the development of the METIS Collaboration of which the new centre at Birkbeck is part.

Abstract:

Introduced in 2004, the Management Standards encapsulate the UK's approach to the management of psychosocial and organizational risks to employee health. More commonly, they are referred to in terms of the UK government's strategy for dealing with work-related stress. Mackay has described their development and introduction as a non-legislative instrument within the framework of UK health and safety legislation (Mackay et al, 2014). There has been some interest in promoting similar approaches to the Management Standards across Europe and with some success (see, for example, Italy: Marinaccio et al, 2013). There has also been work on developing the approach further both through HSE-funded research (Cox et al, 2009) and through European bodies such as the Senior Labour Inspectors Committee (Cox, 2013). These developments have been framed by a global economic crisis and recession that has badly affected both the UK and the rest of Europe and from which they have not yet recovered.

Looking back, this paper considers the nature of the Management Standards approach and its underlying philosophy and, looking forwards, its utility in the current economic situation and its possible future development.

EAOHP Fellowship Keynote Address: Job Demands and Job Resources: Given and Crafted

Evangelia Demerouti

Human Performance Management Group, Eindhoven University of Technology, Eindhoven, The Netherlands



Evangelia Demerouti (1970) studied psychology at the University of Crete (Greece). After graduating (cum laude), she received a scholarship from the German Academic Exchange Office to work on her PhD. She obtained her PhD in Work and Organizational Psychology (cum laude, 1999) after finishing her dissertation on the Job Demands-Resources burnout model from the Carl von Ossietzky Universität Oldenburg (Germany). Having

worked as a post-doc researcher at Erasmus University Rotterdam and Radboud University Nijmegen, Evangelia was assistant professor and associate professor at Utrecht University between 2002 and 2009. In September 2009 she was appointed as full-time professor at Eindhoven University of Technology. Since September 2011 she is the Chair of the Human Performance Management Group. Her research focuses on the processes enabling performance, including the effects of work characteristics, decision making, occupational well-being, and work-life balance. She has published over 100 national and international papers and book chapters on these topics, and is associate editor of the *Journal of Personnel Psychology*. Her articles have been published in journals including *Journal of Applied Psychology*, *Journal of Occupational Health Psychology*, and *Journal of Vocational Behavior*.

Abstract:

The Job Demands-Resources model (JD-R) emerged from dominant work psychological models. The JD-R model was developed to explain the development of the two components of the burnout syndrome i.e. exhaustion and distancing from work. Already from the beginning of its introduction the model proved to be able to explain employee health and motivation. The main assumption of the JD-R model is that although each occupation has its own specific characteristics that may influence employee well-being and job performance, these characteristics can be classified in two general categories, i.e. job demands and job resources. Job demands represent aspects of the work that require effort and therefore are associated with specific physical and psychological costs. Therefore, job demands are generally considered as the initiators of the health impairment process. In contrast, job resources are aspects of the work environment that help to fulfil job demands or reduce the associated costs and stimulate learning. Job resources are the most important

predictors of work engagement, and are the initiators of a motivational process. The JD-R model has been expanded with additional elements to examine how job demands and (job and personal) resources have unique and multiplicative effects on job stress and motivation, and to focus on reversed effects of health and motivation on job demands and job resources. The aim of the presentation will be to present evidence for processes and assumptions of the JD-R model as well as for the usefulness of the model to explain individual and organizational outcomes.

Inspired by the idea that individuals are active agents who can also influence their job, the presentation will go on and focus on job crafting. Job crafting refers to proactive and voluntary adjustments that individuals make in their work in order to make it more meaningful and satisfying. According to the JD-R model employees can increase resources, increase challenges, and decrease demands. It is suggested that job crafting represents a relatively new paradigm that organizations can stimulate to improve the working conditions for their employees. To highlight the usefulness of job crafting, a bottom-up job crafting intervention will be presented which aims to stimulate job crafting behavior of employees such that they (re)design their job demands and job resources according to their preferences. The presentation will conclude with evidence on the effectiveness of the intervention to increase well-being and (adaptive) performance among different occupational groups. The basic premise is that job crafting can be used in addition to top-down approaches to improve jobs in order to overcome the inadequacies of job redesign approaches, to respond to the complexity of the contemporary jobs, and to deal with the needs of the current workforce. Finally, the presentation will close with an outlook on future challenges regarding job characteristics and the possibilities for organizations and employees to optimize them in order to contribute to healthy organizations and individuals.



SPECIAL SESSIONS



Division of Occupational Psychology

Applying the science of psychology to work

The Division of Occupational Psychology (DOP), one of the member networks of the British Psychological Society, promotes the professional interests of occupational psychologists in the United Kingdom.

The DOP aims to develop occupational psychology as a profession and as a body of knowledge and skills. We help support division members with training and advice, have regular events, and contact members with updates and news throughout the year. The DOP has organized two symposia at the EAOHP 2014 conference and sponsored the evening reception.

What is Occupational Psychology?

Occupational psychology is the application of the science of psychology to work. We seek to deliver tangible benefits by enhancing the effectiveness of organizations and developing the performance, motivation and well-being of people in the workplace. Occupational psychologists develop and apply a range of tools and interventions, including psychometrics and assessment, learning and development, well-being and stress management, organizational change, coaching and job design.

How can I find an Occupational Psychologist?

You can find an occupational psychologist through the British Psychological Society's website at www.bps.org.uk or by calling the Society on 0116 254 9568.

Where can I find out more about the Division?

For details of our events and to download some of our factsheets and case studies, please visit our website at www.bps.org.uk/dop. You can also e-mail the Division with any further queries, at dop@bps.org.uk.

Similarities with EAOHP

Both professional groups work to improve professional practice for their respective areas, which culminates generally in their flagship conferences.

Dr. Roxane L. Gervais CPsychol CSci, Chair Elect DOP

Dr. Roxane L. Gervais is a Chartered and Registered Occupational Psychologist who researches and promotes solutions to work-related issues. She has experience of working in diverse teams and in international environments. She researches diversity issues, especially with respect to women who work, as well as stress and well-being at work. This aspect of her research has led to her facilitating training on work-related stress and well-being as well as undertaking stress audits within organizations. Roxane has volunteered with her professional body, the British Psychological Society, for over ten years including the Division of Occupational Psychology, as she thinks it is important to assist in promoting her profession.

DOP Symposium: Researching the Work/Non-Work Interface: A Focus on Diversity and Difference in Sampling, Measurement and Management.

Gail Kinman¹, Almuth McDowall²

¹*University of Bedfordshire, Bedfordshire, UK,* ²*University of Surrey, Surrey, UK*

Work-life conflict has become the primary occupational health concern of UK employers. Its negative impact on employees and organizations is well recognised. This invited symposium presents research that applies diverse approaches to researching the work/nonwork -life interface. It has been argued that work-life research should explore and embrace diversity in employment contexts, employees' life circumstances, and their boundary management preferences and strategies. The five papers that comprise this symposium focus on these issues. The symposium also explores the strategies that are likely to lead to work/non-work enhancement and enrichment as well as conflict. A wide range of quantitative and qualitative methodologies are utilised by the authors.

Paper 1 focuses on the risks that teleworking can pose to wellbeing. Through the analysis of cross-sectional and diary data, the paper explores the relationships between telework, the frequency and nature of communication, feelings of isolation and work and wellbeing outcomes. Paper 2 also focuses on the wellbeing and effectiveness of remote workers. It draws on a series of studies to identify the strategies that could be used by e-workers, supervisors and organizations to improve performance, as well as help employees manage the work/non-work interface more effectively and, accordingly, enhance their wellbeing. Paper 3 adopts a job-specific approach to exploring the ways in which employees from a major UK police force facilitate their own work-life balance. A range of methods are utilised to inform the development of a competency framework of solution-focused WLB behaviours. Paper 4 examines the work-life balance experiences of people who have life partners employed in similar professions (i.e. work-linked couples). It draws on interviews to explore experiences of work-related spillover relating to the nature of the work, the boundary management strategies utilised to facilitate recovery, the extent to which they are congruent between partners, and the implications for work-life balance, recovery and wellbeing. Paper 5 challenges the stereotypical notion of a "dependent" by exploring the work-life balance experiences of mothers who care for a child with Autism Spectrum Disorder. A narrative approach within a lifespan perspective was utilised which facilitated an examination of mothers' accounts over time via semi structured interviews.

The symposium will conclude with a brief discussion regarding the need to identify research priorities to ensure that diversity and difference in terms of professional context, employees' personal circumstances and boundary management styles and behaviours is addressed in order to inform the development of equitable and effective work-life balance strategies.

Paper 1: Teleworker Isolation and Well-Being Outcomes.

Alexandra Beauregard, Kelly Basille, Esther Canonico

London School of Economics, London, UK

Research on telework frequently demonstrates positive outcomes (Gajendran & Harrison, 2007; Golden, 2006; Sardeshmukh, Sharma, & Golden, 2012). There are exceptions to this general pattern of results however; with some scholars finding greater evidence of mental health problems among teleworkers (Mann & Holdsworth, 2003), and others finding that teleworkers report isolation (Crandall & Gao, 2005; Harpaz, 2002). In this context, isolation is the sense that one is out of touch with others in the workplace, both physically and in terms of communication. Face-to-face interactions are thought to be crucial for developing interpersonal workplace relationships, but these may be lacking for those who engage in frequent telework (Feldman & Rafaeli, 2002; Hylmo, 2006). However, several studies have found that non-exclusive telework has little impact on communication frequency or quality, and does not lead to teleworkers feeling "left out" of the office network (Bélanger, 1999; Duxbury &

Neufeld, 1999; ten Brummelhuis, Haar, & van der Lippe, 2010). Faced with inconclusive findings regarding telework, isolation, and employee outcomes, the present study aims to unpack the linkages among telework, communications, isolation, and work and well-being outcomes. Regression analyses and tests for mediation were conducted using a sample of 514 teleworkers and office workers in a cross-sectional study. A 14-day diary study with 75 “high-intensity” teleworkers (working 20% or more of their work hours from home) was also conducted.

In the cross-sectional study, frequency of telework was negatively related to frequency of communications with both managers and co-workers. Frequency of communications was negatively related to isolation, which in turn was positively related to stress and work-life conflict, and negatively related to job satisfaction and well-being. In the diary study, working from home predicted fewer interactions overall that same day with both managers and co-workers, but more phone interactions. Reduced face-to-face interactions were positively related to perceptions of isolation that day, and mediated the relationship between working from home and isolation. Isolation was negatively related to daily experiences of job satisfaction and well-being, and positively related to daily stress and work-life conflict.

In conclusion, findings indicate that even when telework is non-exclusive, isolation can be experienced on days worked from home. The repercussions of isolation may counteract the positive impact that telework is thought to have on job-related and well-being outcomes. Increased phone interactions when working from home appear incapable of substituting for the positive effects of face-to-face interactions.

Paper 2: The Development of ‘Actionable’ Strategies for Individuals, Supervisors and Organizations to Facilitate the Improvement of Work-Life Balance, Job Effectiveness and Well-Being of Remote E-Workers.

Christine Grant¹, Louise Wallace¹, Peter Spurgeon²

¹Coventry University, Coventry, UK, ²University of Warwick, Warwick, UK

Work-life balance has been widely researched and there are many validated scales that measure the interaction between work and non-working lives. However, existing work-life balance scales cannot assess applied actions or strategies and the emerging impact of remote e-working. E-working is now on the increase, with forecasts for growth into the trillions worldwide. Whilst e-working has been linked to productivity gains, its impact on employees’ well-being and work-life balance has not been measured systematically. The purpose of this research was to develop a set of ‘actionable’, applied strategies for individuals, supervisors and organizations which have the potential to improve their e-working capability. These strategies would be linked to the e-work-life scale that had been developed through an earlier study. The present research utilised the new e-work-life scale to obtain self-reports of job effectiveness together with a measure of well-being (SF36 v2).

The strategies were developed from triangulation of qualitative and quantitative data. Interviews were conducted with 11 exemplar e-workers from across five organizations and open-ended data was obtained from an online survey of over 250 participants. In total 58 strategies were developed for individuals, supervisors and organizations. Ten qualitative interviews were subsequently conducted with experienced e-workers from three organizations who were employed in a variety of job roles. Interviewees completed a card prioritisation task and were asked open-ended questions on their remote working effectiveness. Framework analysis of the interviews indicated that to curb the negative effects of e-working, an organizational culture based on rewarding outputs as opposed to presenteeism would be beneficial. Autonomy to manage workload and management style were also found to be important indicators of e-working effectiveness.

The research found that remote technology allowed many participants to manage the work-home interface effectively. Whilst previous research using the e-work life scale had highlighted positive attitudes towards e-working, some negative aspects also emerged when discussing the strategies, including the risk of over-working. Well-being was reported as good amongst the e-workers, but there were signs of tiredness and burnout in some participants. Future directions could include the development of an online version of the scale comprising the associated strategies.

Paper 3: Managing your own work-life balance – what works in the police?

Almuth McDowall

University of Surrey, Surrey, UK

Whilst research that examines work-life balance (WLB) has expanded considerably, novel paradigms are required to progress the field and inform the development of effective interventions. Moreover, little is known about what individuals can do to facilitate their personal WLB in organizational contexts. To address this gap in the WLB literature, this study aimed to elicit behaviours used by employees to self-manage WLB. These behaviours would subsequently be used to develop a competency-based WLB framework that encompasses the knowledge, skills, and abilities required in a particular occupational context which could be subsequently compared with existing WLB frameworks.

Participants were recruited from a major UK police force which was currently experiencing particular challenges in managing the work-life interface due to increased job demands and organizational cutbacks. Participants were employed in a range of operational job roles, including uniformed officers and civilian staff. Taking a mixed methods approach, semi-structured interviews were initially conducted to elicit 134 distinct WLB behaviours (n = 20) and a card sort task (n = 10) was subsequently performed to group these into 12 behavioural categories. This elicitation stage informed the development of an online survey (n = 356) for initial validation. Item and content analysis reduced the existing WLB behaviours to 58, which were then analysed using reliability and correlational analyses.

A framework of eight competencies were found to best fit the data. These encompassed a range of strategies, including Boundary Management, Managing Flexibility, and Managing Expectations. The WLB self-management behaviours comprise a range of solution-focused strategies with the potential to underpin future WLB-focused interventions, thus helping individuals to negotiate borders effectively in specific occupational contexts. In conclusion, a competency-based approach has the potential to further our understanding of 'what works' in practice.

Paper 4: Boundary Management Strategies in Work-Linked Couples.

Gail Kinman

University of Bedfordshire, Bedfordshire, UK

There is evidence that having a spouse/partner who does similar work has implications for their work-life balance. Employees in a work-linked relationship have reported higher levels of work-life integration, weaker boundaries between work and home, greater commitment to the job role, and more work-life conflict than those whose partners did different work (Kinman, 2012). Nonetheless, there may also be benefits for work-linked couples in terms of greater understanding of the nature of work demands and increased support during stressful periods (Halbesleben et al., 2010). The present study examined how people in work-linked relationships negotiate work/non-work boundary management. The ways in which doing similar work can spill over into non-working life were explored, together with the strategies utilised to manage the work/non-work interface and facilitate respite and recovery, the extent to which they are congruent between partners, and the implications for work-life balance and wellbeing. Kossek and Lautsch's (2012) typology of work-family management styles was utilised as a framework through which to explore integration/segmentation/ alternating boundary management behaviours and preferences.

Semi-structured interviews were conducted with people in work-linked relationships. Interviewees worked in a range of occupations (e.g. education, police and health and social care). Thematic content analysis was utilised and critical incident analysis was used to examine the ways in which work demands can spill over into non-working life, boundary management preferences, the congruence/incongruence between couples' boundary management strategies, and their implications for work-life conflict/balance, recovery and wellbeing. Also elicited, were examples of situations where partners' behaviour compromised/facilitated work-life balance and ways in which this was managed.

Findings highlighted considerable variation amongst participants in work/non-work integration/segmentation/alternating boundary management styles and preferences. Most participants indicated that their work/non-work lives were more integrated and less segmented than they would prefer, but they generally perceived little control over this. Little congruence between boundary styles and preferences between couples was found, but participants frequently observed that their partners had a healthier work-life balance than them. In general, however, differences within couples were not seen as engendering work-life conflict and impeding recovery processes, provided strategies were communicated and negotiated. Some evidence was found that people in "helping" professions tended to experience strain-based spillover on a frequent basis, and the strategies utilised to manage this could interfere considerably with respite and recovery.

Paper 5: Having Our Voices Heard - Different Narratives of Work-Life Balance.

Julia Fernando, Almuth McDowall

University of Surrey, Surrey, UK

Work-life balance (WLB), defined as the perceived fit between work and family life, is a key predictor of employee wellbeing. A lack of WLB has become a key concern for employers over and above work-related stress (Grid, 2012). Much research has focused on working parents who are required to manage the competing demands of home and work. Diversity in terms of sampling and measures is notably absent in work-family research (Gattrell et al., 2012; Ozgilbin et al., 2010).

The literature to date has considered how caring for a dependent can adversely affect WLB. However, reflecting the lack of diversity inherent in work-family research, studies have focused on parents of neurotypical children. The present study challenges the stereotypical idea of a 'dependent' by exploring WLB in nine mothers who care for a child with a disability: namely Autism Spectrum Disorder (ASD).

Data were collected through semi-structured interviews. Utilising a narrative approach (NA) within a lifespan perspective, these mothers' accounts were studied over time. A shared trajectory emerged across all accounts, which fluctuated according to the mothers' WLB wants and needs. Transition periods (pre- and post-ASD diagnosis) were found to trigger profound uncertainty in these mothers and thus greater work-life conflict. Poorer WLB led to physical (exhaustion, ill health), emotional (depression, confusion and social isolation) and cognitive (loss of concentration) functioning in all nine mothers. Employer and family support, diagnosis of the child's disability and workplace flexibility were considered integral to maintaining healthy WLB. All narratives ended with an element of uncertainty due to mothers' concerns that their child would have a long-term dependency on them even into adulthood.

The present study also highlights the importance of active communication between employer and employee which encourages legitimate dialogue on these issues within the workplace. The importance of taking a preventative rather than reactive stance on WLB management and catering for diverse populations and needs is emphasised.

DOP Symposium: People Management – Vital for Employee Health, Wellbeing and Engagement: Research Into Practice.

Emma Donaldson-Feilder¹, Rachel Lewis^{1,2}

¹*Affinity Health at Work, London, UK*, ²*Kingston Business School, London, UK*

The literature around employee health, wellbeing and engagement on the one hand, and people management on the other hand, are both large and growing. For many years, the relationship between the two areas, while obvious in the practitioner domain, had received little research or theoretical attention. However, over the last ten years, the volume of research looking at this relationship has grown dramatically. The consistent message from this growing body of work is that the way people are managed is one of the key determinants of their health, wellbeing and engagement (e.g. Skakon, Nielsen, Borg & Guzman, 2010; Alfes et al, 2010).

A wide range of research has explored the impact of management/leadership behaviours and styles on employee stress and affective wellbeing. A review of the literature concluded that the behaviours of those in management positions, their relationship with those they manage and particular leadership styles are all associated with stress/wellbeing outcomes (Skakon et al, 2010). Research on sickness absence and return to work has also shown that people management, and particularly the role of the line manager, is important in managing sickness absence and facilitating employee return to work following sickness absence (Donaldson-Feilder, Munir & Lewis, 2013).

While the academic research exploring the link between management and employee engagement is more limited, the practitioner literature places a considerable emphasis on the importance of management (e.g. MacLeod and Clarke, 2009). Research has also started to create frameworks of the management behaviours that are significant in these different health, wellbeing and engagement contexts (e.g. Yarker, Donaldson-Feilder & Lewis, 2008; Lewis, Donaldson-Feilder, Tharani & Pangallo, 2011).

This symposium will look at the way people management influences employee health, wellbeing and engagement, from a range of angles, including research on manager behaviours, individual differences and the management of wellbeing in an ageing workforce. It will then offer the opportunity for an exploration of how we can ensure that the research in the field is applied in practice, through a panel discussion and audience interaction.

Paper 1: Managing for Sustainable Employee Engagement and Wellbeing.

Rachel Lewis^{1,2}, Emma Donaldson-Feilder¹

¹*Affinity Health at Work, London, UK*, ²*Kingston Business School, London, UK*

Employee engagement is now widely accepted as a key factor in achieving performance in the workplace. However, if the focus is purely on engagement, without considering employee wellbeing, there is a risk that any engagement created may become unsustainable. It is therefore important for employers both to engage their employees and to protect their wellbeing.

A range of recent research and reports have highlighted the important role of line managers in influencing engagement (e.g. Alfes et al, 2012; McLeod & Clarke, 2008). It has also been consistently shown that managers are key to the health and wellbeing of employees (e.g. Kelloway and Barling, 2010; Skakon et al, 2010; Black, 2008). This suggests that, in order to achieve both engagement and wellbeing in employees, line managers need to be equipped with the relevant skills and behaviours.

This paper will report on research aiming to help managers understand how to build sustainable employee engagement, by developing a framework of behaviours required to build

engagement in employees whilst also protecting their wellbeing. This research brings together two previously developed management behavioural frameworks: management behaviour for preventing and reducing stress on the one hand (see Yarker, Donaldson-Feilder & Lewis, 2008); and management behaviour for engendering employee engagement on the other (see Lewis, Donaldson-Feilder, Tharani & Pangallo, 2011).

It revealed a 'managing for sustainable employee engagement' framework consisting of five behavioural themes: open, fair and consistent; handling conflict and problems; knowledge, clarity and guidance; building and sustaining relationships; and supporting development. The implications for practice will be explored during the presentation.

Paper 2: Management And Well-Being at Work: The Role of Individual Differences.

Ivan Robertson

¹*Robertson Cooper Limited, Manchester, UK,* ²*Leeds University, Leeds, UK*

Much research on psychological health at work focuses on the role of situational factors, such as demands, control and support as primary influences on psychological well-being at work. This paper focuses on the influence of stable psychological factors, such as personality, and attempts to evaluate their contribution to psychological well-being at work. Both manager and employee individual differences may be important. As far as managers are concerned, existing research has already demonstrated that manager behaviour has an impact on employee well-being at work (e.g. Gilbreath and Benson, 2004; Barling and Carson, 2008).

This paper examines the possible role that relatively stable individual differences (e.g. personality, management style) may play in the impact that managers have on the psychological health and well-being of employees' psychological health at work. Although it is clear from existing research that manager behaviour has an impact on employee psychological well-being, the mechanisms involved are not yet well understood. Managers may have a direct impact on employee well-being via dyadic interactions; they may exert an indirect impact by influencing the workplace pressures that employee's experience; or their impact may be through contagion (Johnson, 2008).

Employee individual differences may also be a significant factor in determining psychological health at work. Research has already indicated that aspects of personality (e.g. tendency to experience positive emotions) are related to reported levels of individual well-being, implying that employee reports of their levels of psychological health at work may be directly influenced by personality factors. Employee individual differences may also be important in terms of the interaction between manager and employees.

This paper will review the existing research and examine various models for how individual differences may play a role in psychological well-being at work. Original research based on empirical data will also be presented to explore some specific issues. In particular the relationship between manager personality and employees' experience of workplace stressors and relationships between employee personality and reported workplace pressures and levels of stress will be explored.

Paper 3: Managing the Wellbeing of an Ageing Workforce.

Sheena Johnson

Manchester Business School, Manchester, UK

An ageing workforce presents challenges for organizations in managing employee health. Across the European Union there are changing demographics in workplaces. The 2012 European Health Report stated that an estimated 15% of the overall population of the European Region was aged 65 years and over in 2010 with this expected to rise to 25% by

2050. Related to this are pension and retirement changes, with the UK state pension age rising to 68 by 2046 and the abolishment of the UK default retirement age in 2011. Such changes are arguably necessary given an increasingly older working population but also pose questions as to how an older workforce can be successfully managed in terms of health, wellbeing and performance. For example retirement is a significant life change and increased uncertainty around retirement may negatively impact health and wellbeing.

Fairness at work issues with regard to older workers will be presented, including a summary of research into age and work in terms of older worker stereotypes and older worker performance. The validity of stereotypes will be challenged based on empirical research evidence into the age and performance relationship (e.g. Ng & Feldman, 2008; 2010) and the age and health relationship (e.g. Johnson, Holdsworth, Hoel & Zapf, 2013). In addition an argument will be put forward advocating the need for such unsubstantiated stereotypes to be changed given the increasingly older workforce and regulatory changes outlined above.

Recommendations will be made for organizations to successfully manage an older workforce. These recommendations include, for example: raising awareness about changing retirement and pension issues; explicitly valuing older workers; avoiding age discrimination; providing age appropriate training opportunities.



'Healthy Workplaces Manage Stress' Campaign 2014–15, organised by the European Agency for Safety and Health at Work (EU-OSHA).

EU-OSHA Special Session: Managing and Assessing Work Related Stress in Europe. State of Art of National Strategies

Sergio Iavicoli
INAIL, Rome, Italy

The last decades have seen significant developments in the economic, political, technological and social landscape, that led to re-shape the nature of work with several impacts on working conditions and the emergence of new risks for health and safety in the workplace, including work-related stress and its consequences for workers' health (ILO, 2010; Kompier, 2006). Stress represents the second most frequently work-related health problem after musculoskeletal diseases. It affects nearly 30% of workers in the European Union (EU) (EUROSTAT, 2010) and accounts for 50-60% of all lost working days. In 2002, the annual cost of work-related stress in the EU-15 was estimated to be 20 billion Euros (EU-OSHA, 2007). Starting from the 1970s to today, several initiatives were conducted at the research, implementation and policy level as the growing awareness of the impact of work-related stress risk. Following the EU Framework Directive 89/391/EEC, the European Framework Agreement of 8 October 2004 prompted to the inclusion of work-related stress and psychosocial risks in the agenda of the main international research institutes and OSH bodies. Thus, several initiatives and approaches were over time developed to provide policy makers, employers, trade unions, experts and employees with theoretical frameworks and practical tools for assessing and managing work-related stress risk.

The European initiative Prima-EF (Psychosocial Risk Management–Excellent Framework) aimed at providing a comprehensive best-practice framework to promote policy and practice at national level and in companies in Europe (Iavicoli, Leka, Jain, et al., 2012). Furthermore, among the others, the UK Management Standards for Work-related Stress (Health Safety Executive [HSE], 2007), the Italian methodology to assess and manage work-related stress risk developed by INAIL (Persechino et al. 2013; Rondinone et al. 2012), the Belgian Screening, Observation, Analysis, Expertise (SOBANE) strategy of risk management (Malchaire et al., 2008), the German Stress–Psychology–Health (START) (Satzler & Geray, 2006) as well as PreventLab- psychosocial methodology (Peirò, 2000) as methodologies to support companies in the psychosocial risk management. As a clear signal of the growing interest in Europe on work-related stress, the next EU-OSHA campaign will focus on managing stress and psychosocial risks at work, running under the title “Healthy workplaces manage stress”.

This special session aims to offer a portrait of the state of art on the management of work related stress risk in Europe in order to identify needs and challenges to move towards the development of integrated monitoring systems for health and safety at Europe level. Starting from the principles and activities related to the next EU-OSHA campaign 2014-2015, a debate among representatives of the main European methodologies and initiatives will be offered in order to identify future steps and challenges in the management of work-related stress risk in Europe.

Paper 1: The UK Management Standards: Lessons Learnt

Peter J. Kelly

HSE, London, UK

The UK management standards for work related stress was developed as a systematic national approach for reducing incidents of work related stress and promoting a risk assessment approach to helping to tackle work related stress. Launched in 2003 the Management Standards for Work related Stress were created to be a unique intervention, which was grounded in empirical evidence and developed in a full consultation with across UK stakeholders.

The management standards process was driven by a commitment to reduce incidence and prevalence rate of work related stress with the UK. Days lost to work related stress in 2003 were 13.5 million days by 2010 days lost was down to 10 million days lost. An equal reduction of prevalence was seen in the data between 2003 and 2010. The Management Standards process has been adapted in a number of different countries and remains the UK’s primary intervention to manage work related stress

This session will discuss the progress and application of the management standards process. It will discuss how the Management Standards have been instrumental in reducing both incidence and prevalence of work related stress within the UK workforce and present recommendations for future directions. In particular it will highlight the lessons learnt from the 10 years the campaign has been running and how this fits into the European context

Paper 2: Assessment and Management of Work-Related Stress Risk in Italy. Updates on INAIL’s Methodology

Sergio Iavicoli

INAIL, Rome, Italy

From the 1970s to today, research on stress has strived to develop theoretical models to address and manage stress, its determinants and impacts. As a consequence, work-related stress and psychosocial risks have been included in the agenda of the main international research institutes and OSH bodies. This prompted the implementation of several approaches and projects to provide methodological approaches as well as practical tools for assessing and managing psychosocial risks.

In Italy, the regulatory framework for health and safety in the workplace (L.D. 81/08) highlighted the employers' obligation to assess the work-related stress risk. Through a collaborating network and after a benchmarking analysis of the main European approaches, a methodological proposal has been developed, based on the UK HSE Management Standards approach. The INAIL's methodology provides companies a broad approach to assess and manage work-related stress risk in compliance with the Italian regulatory framework and recognizing as well as including workers themselves. Furthermore, several useful tools were developed and collect in a user-friendly web platform to help companies in the assessment and management of work-related stress risk by themselves. A follow-up survey on the companies using the whole method is currently in progress as well as the collaboration with other technical and academic bodies to offer an updated monitoring of the application of the methodology. Accounting for the growing number of companies registering, INAIL platform data will contribute to the monitoring phase set out by the Italian Consultative Committee on the state of the art of the assessment of work-related stress risk in Italy and on the efficacy of the provided guidelines. Progress of the INAIL's methodology and future directions will be discussed, including developments in progress to offer companies tailored tools as well as customized solutions and interventions.

Paper 3: Strategy and Approaches in Germany to Assess and Manage Work-Related Stress

Michael Ertel

BAuA, Dortmund, Germany

Although a growing body of research attributes mental health problems to psychosocial risk factors, in particular work-related stress, so far these risks have not been sufficiently addressed in the workplace. In particular, the implementation of risk assessment for work-related stress is inadequate. Against this background, the German OSH actors have stepped up their activities to address mental health problems associated with work-related stress. Recent regulatory and institutional responses to these challenges include: (1) cooperation of the three institutional OSH actors in the Joint German Occupational Safety and Health Strategy (GDA); (2) legal clarification to assist employers in complying with their duties under law (since 2013, the German Occupational Safety and Health Act explicitly states that psychosocial hazards in the workplace have to be included in risk assessment); and (3) joint declaration on mental health in the workplace by the Federal Ministry of Labour and Social Affairs (BMAS) and the Social Partners (2013).

In 2012, GDA issued the "Guideline on counselling and inspection in relation to psychosocial factors in the workplace". In this document, standards were set which mandate the labour inspectorate to inspect all workplaces for psychosocial factors and to control whether employers have carried out risk assessment for work-related stress properly. Based on a review of scientific evidence (to be further elaborated by additional research carried out by BAuA) and agreement among OSH practitioners, a list of four basic job characteristics were defined which includes psychosocial hazards: (1) work content and work tasks (Items: decision latitude, emotional demands, etc.); (2) work organization (Items: working time, demands for communication and cooperation, etc.); (3) relationships (Items: relation to colleagues and superiors); and (4) working Environment. For each of these job characteristics and the related items, "critical manifestations" (risk factors) were specified which indicate a need for action. Meanwhile, this guideline not only addresses the labour inspectorate but it also delivers orientation for employers about what is expected from them with regard to conduct risk assessment for work-related stress.

Over a long period of time, cross-industry social partners in Germany disagreed on suitable strategies and instruments for the assessment of work-related stress. While considerable agreement between social partners has evolved as regards the need to address work-related stress, unions and employers' organizations still differ in the assessment of whether there

should be more detailed legislation in relation to work-related stress. Taken together, stakeholders and organizations will need time to assimilate concepts promoted by legislation and policy and to translate them into practice. It is a gradual learning and developmental process over time whereby the new OSH strategy will be implemented effectively.

Paper 4: The Belgian SOBANE Strategy and the Prevention of Psychosocial Risks (PSR)

Alain Piette

Service public fédéral Emploi, Travail et Concertation sociale, Brussels, Belgium

The SOBANE strategy was developed and is still developed with the support of the European Social Fund and with the support of the Belgian ministry of work. The Belgian SOBANE strategy for OSH risk prevention, well known in several countries and available in many languages, proposes an OSH intervention in four stages (Screening, OBServation, ANALYSIS, Expertise). SOBANE is one of the few existing tools which propose a first level of intervention with a global (all the risks factors discussed through 18 tables) and participative approach. In this first stage, with the tool called “déparis” and developed for more over 30 activities sectors, the psychosocial factors are also discussed with the workers in order to find solutions and prevention actions. After this first stage, if it is required, some others SOBANE tools exist to go further in the searching of prevention actions. For these other stages of SOBANE, fifteen tools for the Observation and Analysis stages were developed, risk factor per risk factor. One of these tools allows going further in the area of psychosocial risks (PSR).

For an efficient prevention, with the structure in four stages of the SOBANE strategy, we try to organize the collaboration between all the actors, by taking into account the knowledge of the working situation, from the field, in the hands of the workers, and the knowledge of the OSH specialists. The SOBANE Observation tool for psychosocial aspects follows the same structure of the 5 last tables of the Déparis guide, but here we will go more in details for the contents. Of course, the philosophy of SOBANE will be followed. All the points in the Observation method will not be discussed, but only the problems identified with Déparis. If you try to use the full Observation method, without organizationthe screening stage before, it will be too long with too many points of discussion for a two hours meeting; and of course you will miss all the relations between PSR and the other risk factors.

The participation of the worker is the main difficulty for the use of SOBANE, but it is also the main positive point of SOBANE; and probably the main explanation of its success in Belgium, but also in other countries. How to imagine the prevention of OSH risks, and especially of PSR, without this participation? The other positive point of SOBANE is the global approach of all the risk factors at the beginning of the intervention. Too often, PSR prevention in the companies is done completely separately of the prevention of the other OSH risks. This occurs often at different moment, done by different people, without any contact between the different OSH risk analyses. This global approach is particularly important for small and medium enterprises (SME's).

Paper 5: EU-OSHA Healthy Workplaces Campaign ‘Manage Stress’

Malgorzata Milczarek

EU-OSHA, Bilbao, Spain

The 2014-15 EU-OSHA campaign ‘Healthy Workplaces Manage Stress’ aims at raising awareness of the growing problem of work-related stress and psychosocial risks and enhancing practical skills to prevent and manage them successfully among different groups of stakeholders. Employers in Europe have a legal obligation to assess occupational safety and health risks in the workplace and this also include psychosocial risks. Nevertheless, there is a gap between legal obligation and practice observed. There is a lot of sensitivity around this topic, and there is still a stigma around mental health. EU-OSHA ESENER survey (2009) found that 79% of European managers are concerned about stress at work, however less than

30% of organizations in Europe have procedures for dealing with psychosocial risks. Over 40% of European managers consider psychosocial risks more difficult to manage than 'traditional' OSH risks. The main obstacles cited were 'sensitivity of the issue' and 'lack of expertise'. EU-OSHA campaign sets out to improve understanding of the issue and bridge the gap by providing support and guidance for workers and employers.

The message which the campaign aims to get across the European companies of different sizes and sectors is that, although often more challenging because of the sensitivity of their nature, psychosocial risks can be dealt with in the same logical and systematic way as other health and safety issues. Additionally, the campaign encourages employers to take further voluntary actions aimed at mental health promotion. The Good Practice Awards competition accompanying the 2014-15 campaign looks for leading good practice solutions towards managing stress and psychosocial risks at work. The Good Practice Awards Ceremony is held in the second year of the campaign to promote and share good practice, announce the winners of the competition and celebrate the achievements of all those that took part.

The EU-OSHA campaign aims to motivate enterprises of all sizes across Europe to conduct systematic and effective psychosocial risk assessments and to put in place preventive measures using available practical tools and guidance. The campaign advocates that workers and management both need to play an active role and work together to tackle psychosocial risks and work-related stress effectively. The campaign addresses also policy makers, OHS specialists and researchers with up-to-date information on the problem with psychosocial risks in Europe. The existing international and national practical tools for managing psychosocial risks in the workplace and other evidence-based information on stress and psychosocial risks is available through the multilingual campaign Website (www.healthy-workplaces.eu).

Joint EAOHP – ICOH-WOPS Special Session



The policy context to the management of psychosocial risks in the workplace

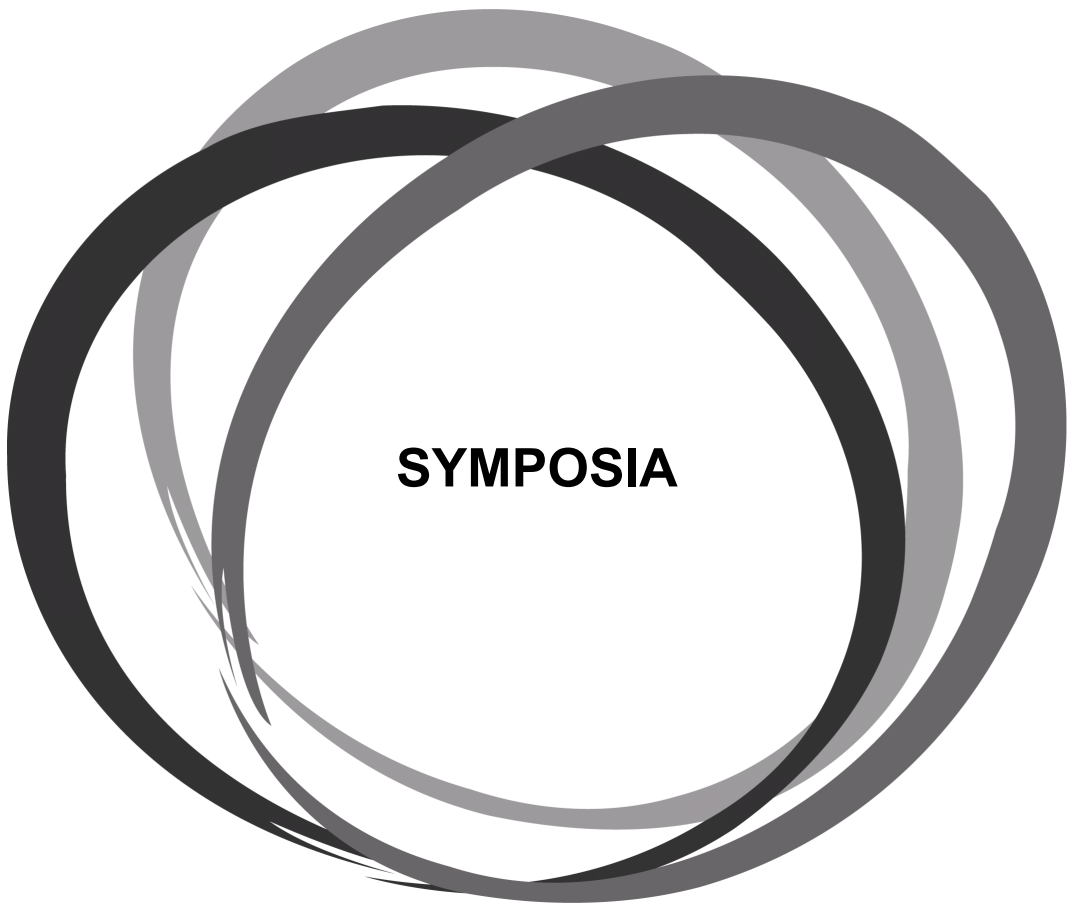
Sergio Iavicoli, *President of EAOHP*

Stavroula Leka, *Chair of ICOH-WOPS*

Maureen Dollard, *President of Asia Pacific Academy for Psychosocial Factors at Work*

Evelyn Kortum, *World Health Organization*

This Special Session is jointly organised by the European Academy of Occupational Health Psychology and the International Commission on Occupational Health Scientific Committee on Work Organization & Psychosocial Factors. The Session will focus on the policy context to the management of psychosocial risks in the workplace and related practice issues. Professor Stavroula Leka, Chair of ICOH-WOPS, will present the findings of a joint ICOH-WOPS/ILO project illustrating the global picture in this area. Professor Sergio Iavicoli, President of EAOHP, will then focus more specifically on the European context, discussing how prioritisation at the policy level is linked to resource deployment through EU framework programmes for research. Professor Maureen Dollard, President of the Asia Pacific Academy for Psychosocial Factors at Work, will discuss developments in that region, highlighting examples of good practice and emerging needs. Finally, Dr Evelyn Kortum, WHO, will offer some overall comments on the global context highlighting the efforts of WHO in this area. The Session will end with the signing of agreements between EAOHP, ICOH-WOPS and the Asia Pacific Academy for Psychosocial Factors at Work to work jointly to promote good practice in the area of occupational health psychology and healthy psychosocial work environments.



SYMPOSIA

Symposium Title: Relationships of Work Demands, Depression and Burnout to Cognitive Processes and their Neuronal Correlates.

Gabriele Freude¹, Peter Martus², Guy Potter³, Sylvia Boden⁴

¹*Federal Institute for Occupational Safety and Health, Berlin, Germany,* ²*Duke University Medical Centre, Durham, USA,* ³*Institute for Medical Biometry, Eberhard Karls University, Tuebingen, Germany,* ⁴*Leibnitz Institute for Labour Research and Human Factors, Dortmund, Germany*

Work-related mental illness and disability are important contributors to both public health burden and lost economic productivity. Job demands can produce both cognitive and emotional stress that result in adverse effects on work performance and mental health. Thus, if a major goal of occupational health research is to reduce work-related illness and disability, then a key target is understanding the complex relationship of job demands to cognition and mental health symptoms. Integrated multidisciplinary collaborations are important for understanding a complex relationship from different perspectives, but are most beneficial when common metrics are employed.

This symposium will present data obtained by multidisciplinary approaches applied to a set of collaborative studies conducted in Germany and the United States. These studies are dedicated to understanding how work demands and cognition are related to work ability, burnout, and depression symptoms. The questions are addressed using both population and laboratory-based approaches, with an emphasis on a common assessment of work demands, mental health, and cognition. The collaboration includes the following partners: 1) Federal Institute for Occupational Safety and Health, Unit: Mental Health and Cognitive Capacity, Berlin, Germany; 2) Duke University, Duke University Medical Centre, Department of Psychiatry and Behavioural Sciences, USA; 3) Leibnitz Institute for Labour Research and Human Factors, Unit: "Aging and CNS changes", Dortmund, Germany; and 4) Institute for Medical Biometry, Eberhard Karls-University, Tuebingen, Germany.

The first paper of this symposium will focus on the predictive power of work-related factors for burnout and depressive symptoms and the interdependency between burnout and depression, which was analysed in a representative sample of the German working population. Taking into consideration that cognition is an important aspect in the work-mental health relationship; the second paper will focus on the associations among quantitative work demands, depression symptoms and burnout among nurses, as influenced by individual cognitive abilities. The third paper will provide information on the work-mental health relationship from the perspective of information processing. The central question will be whether neurophysiological patterns of error and feedback processing are affected in employees suffering from burnout and depression symptoms due to work-related stress. In sum, the symposium will consider work demands and mental illness from different perspectives in order to identify common elements in our understanding of this relationship.

Paper 1: Work Related Predictors of Burnout and Depressive Symptoms.

Peter Martus¹, Uwe Rose², Olga Jakob^{1,3}, Guy Potter⁴, Michael Falkenstein⁵, Gabriele Freude²

¹*Institute for Medical Biometry, Eberhard Karls-University, Tübingen, Germany,* ²*Federal Institute for Occupational Safety and Health, Unit: Mental Health and Cognitive Capacity, Berlin, Germany,* ³*Institute for Biometry and for Clinical Epidemiology at the Charité, Berlin, Germany,* ⁴*Duke University, Duke University Medical Centre, Department of Psychiatry and Behavioural Sciences, Durham, USA,* ⁵*Leibnitz Institute for Labour Research and Human Factors, Unit: "Aging and CNS changes", Dortmund, Germany*

Background: The interdependency of burnout and depression and its relationship to work related factors is an on-going scientific debate. Greater knowledge of these linkages is needed to improve mental health and, to avoid the loss of work ability in the working population.

Methods: A CAPI (computer assisted personal interview) including 4511 subjects (49.6% males, 31-60 years) in the German working population was conducted as part of the S-MGA (Study on Mental Health at Work). Among others indicators for working conditions, burnout and depression were assessed. Burnout was operationalised by using the OLBI (Oldenburg Burnout Inventory) and depressive symptoms were assessed using the patient health questionnaire PHQ-9 (Patient Health Questionnaire). Work related predictors included several scales of the COPSQ (The Copenhagen Psychosocial Questionnaire). Age and gender were also included in the analysis.

Results: Independently of age, circa 90% of the study population showed no symptoms, minimal symptoms, or minor symptoms of depression (PHQ at most 9), with significantly more female subjects showing minor symptoms as compared to male subjects. Less than 5 per cent of the population showed moderate or severe symptoms of depression (PHQ at least 15). The OLBI was 2.72 +/- 0.53 (mean +/- SD). OLBI and PHQ were correlated with $r = 0.55$, Spearman). Burnout was significantly associated with most of the COPSQ subscales, and to age and gender. The adjusted R-Square was 0.29, with highest standardized beta values for quantitative and physical work burden (beta = 0.35, 0.12). Depression could be explained to a lesser degree by these variables (Adjusted R-Square = 0.20, highest standardized beta for quantitative work burden, job insecurity and "mobbing", beta = 0.19, 0.16, 0.15).

Conclusions: COPSQ subscales have a large predictive power for depression and burnout. Work related factors explain symptoms of burnout substantially better than symptoms of depression. However, a strong correlation between constructs, burnout and depression was found within the current sample.

Paper 2: Does Task-Switching Ability moderate the association between Workload Demands and Mental Health?

Guy Potter¹, Kathleen Hayden¹, Michael Falkenstein², Peter Martus³, Eberhard Pech⁴, Uwe Rose⁴, Gabriele Freude⁴

¹Duke University Medical Center, Durham, North Carolina, USA, ²Leibnitz Institute for Labour Research and Human Factors, Dortmund, Germany, ³Charite, Berlin, Germany, ⁴Federal Institute for Occupational Safety and Health, Berlin, Germany

Introduction: Workers in developed economies are increasingly required to operate in a dynamic environment with a high workload and competing task demands. These demands require the ability to shift attention and action, and deficits in this ability may create stresses that affect work performance and mental health. The nursing profession is an occupation which places high quantitative demands on workers, which makes them susceptible to job-related stress. The current paper uses a sample of nurses to examine: 1) the association between quantitative work demands and the levels of; presenteeism, burnout, and depression symptoms, and 2) the extent to which these associations are moderated by task-switching ability.

Methods and Analysis: Approximately 180 nurses aged 30-75 completed a cognitive assessment including a computerised task-switching paradigm, along with questionnaires related to job demands, presenteeism, burnout, and depression symptoms. Job workload and demand was assessed by the Quantitative Demands scale of the Copenhagen Psychosocial Questionnaire (COPSQ). Presenteeism, burnout, and depression symptoms were assessed respectively by: 1) the Stanford Presenteeism Scale, 2) the Oldenburg Burnout Inventory (Exhaustion scale), and 3) the Patient Health Questionnaire-9. Task-switching cost was used as an index of dynamic attentional ability. In separate regression models, we quantitative job demands were examined as a predictor of presenteeism, burnout, and depression symptoms, and analysis was conducted to assess whether outcomes in the models were moderated by task switching cost. The contribution of age to the current results will be discussed, and the preliminary findings on the association of baseline measures to presenteeism, burnout, and depression symptoms over a 3-month follow-up interval will be presented.

Conclusions: We will discuss whether the current results are congruent with the conceptualisation that when job demands do not match the capabilities of the worker mental health is adversely affected. We also will evaluate the current results with respect to prevailing models of cognition and workplace stress, highlighting the areas of consistency and inconsistency. Finally, the generalisability of the current findings will be discussed as well as the study's potential limitations.

Paper 3: Work-Related Psychomental Load: Effects on Brain Electrical Correlates of Information Processing.

Sylvia Boden, Michael Falkenstein, Rita Willemsen

Leibniz Research Centre for Working Environment and Human Factors, Dortmund, Germany

Introduction: Work-related stress can lead to burnout, depression and, to an impairment of information processing due to alterations within the underlying brain systems. One brain system possibly impaired by stress is the reward system; which sub-serves the detection and evaluation of errors and feedback. The reward system is altered in people with manifest depression. Such impairments can lead to an incorrect evaluation of, and impair learning from errors and feedback. The present project aimed to investigate whether such impairments are also present in stressed subjects without manifest depression but with burnout and depression symptoms. On the other hand, exogenous factors (such as protective work conditions) and endogenous factors (such as the state of certain cognitive functions) may influence the relationship between workplace stress and the development of burnout and depression.

Methods: The individual state of the reward system and of endogenous control functions can only directly be measured in human subjects using electro-physiological methods; specifically the event-related potentials (ERPs) which are derived from the electroencephalogram (EEG). The present project investigates, for the first time, the impact of work-related stress which has led to burnout/depression symptoms on error and feedback processing by using ERPs. Secondly, the moderating influence of certain cognitive functions, the endogenous control functions, as well as exogenous work-related factors on the relation between work stress and burnout/depression with ERP methodology was explored. With these aims in mind, circa 80 employees from stress-burdening occupations (teachers, medical and elderly care nurses, physicians, etc.) with different ERP-based tasks were assessed with regards to both the reward system and endogenous control functions.

Results: It is anticipated that ERP parameters of the reward system will be impaired (reduced and/or delayed) in participants who report many vs. few burnout/depression symptoms. It is also envisaged that in people with beneficial work conditions (such as high freedom of action) and a good state of certain endogenous control functions (as reflected in ERP parameters) then burnout/depression symptoms will be reported less often. The first results of this study will be presented at the conference.

Symposium Title: Resilience Building in UK Policing.

Noreen Tehrani^{1,2}

¹*Noreen Tehrani Associates, London, UK,* ²*Professional Development Foundation, London, UK*

This symposium demonstrates how four police forces have worked with an Occupational Health Psychologist to address some of the most challenging difficulties facing policing today. Each of the presentations will show how it introduced, managed and evaluated a particular intervention designed to reduce the incidence of psychological distress and trauma. This symposia as a whole will demonstrates the value of multi-disciplinary working with the involvement of psychologists, ergonomists, health and safety professionals, counsellors, police officers and human resources professionals.

The symposium is made up of four presentations each involving a different police force. Taken as a whole the symposium will provide attendees with an insight to the issues involved in working in this environment and how these interventions have helped to increase understanding of the importance of building resilience.

Paper 1: Introducing Psychological Screening for High Risk Policing Roles.

Noreen Tehrani^{1,2}, Caroline Russell³

¹Noreen Tehrani Associates, London, UK, ²Professional Development Foundation, London, UK, ³Hampshire Police, Hampshire, UK

This paper presents some early results of a pilot study to evaluate the benefits of introducing screening for officers undertaking work in a number of high risk roles including Roads Policing, Child Abuse and Forensic Computers. A number of policing roles have been identified as involving foreseeable risks to officers and staff (HSE, 2011). Dealing with major disasters in which officers have been involved in the rescue of seriously injured victims or dealing with body recovery have been shown to increase the incidence of traumatic stress (Tehrani, 2010).

Less well recognised, is the impact of indirect exposures to death, pain and injury through supporting victims (Steed & Bicknell, 2001), reading or analysing accounts of the traumatic events (Vrklevski & Franklin, 2008) or viewing images of the traumatic events (Burns et al., 2008). Exposure to distressing or traumatic information in the form of pictures, films, statements or materials has also been found to be challenging (Cornille & Meyers, 1999).

Whilst there is evidence that many police officers and others professionals involved in this work have been found to be resilient and able to cope with the demands of their roles, some have succumbed to a range of psychological conditions including anxiety, depression, burn-out and secondary traumatic stress (Alexander, 1999; Mitchell et al., 2000).

Hampshire Police took the decision to undertake a structured risk assessment approach to the identification of psychological risks to officers and staff in three areas of policing recognised as being challenging. This presentation will review the process of risk assessment and also share the results from the evaluation of the screening which has involved quantitative and qualitative feedback from the officers, staff and occupational health professionals involved.

Paper 2: Resilience in Public Protection.

Noreen Tehrani^{1,2}, Elizabeth Eades³

¹Noreen Tehrani Associates, London, UK, ²Professional Development Foundation, London, UK, ³Surrey Police, Surrey, UK

The Public Protection Investigation Unit (PPIU) within Surrey Police is a specialist area of policing, bringing together expertise dedicated to the provision of protection for three sections of society who may become exposed to:

- Childhood Abuse;
- Domestic Violence;
- Vulnerable Adult Abuse.

There are three PPIU teams of around 90 employees in total. The teams are located within the geographical areas which they support: Guildford, Reigate and Staines. The structure in each location includes a Detective Inspector, and four operational teams led by a Detective Sergeant. Surrey Police recognised over two years ago that working in PPIU created a psychological risk to its officers and staff. At that time it was agreed that anyone selected for deployment into a PPIU role would undergo a personal risk assessment which involved the completion of a set of questionnaires, an evaluation of the results at which time any potential recruit with a high risk profile would be seen by a Occupational Health Nurse for an initial

interview and where necessary referred on for a full psychological assessment by the Force's Psychologist.

Surrey Police have recently completed a review of the programme of support within the PPIU with the following objectives:

- Assess the current level of psychological wellbeing present within the three PPIU clusters;
- Identify if there are any psychosocial factors which can be helpful in predicting resilience;
- Highlight any ergonomic factors which could have an impact on wellbeing;
- Gather the opinions of a representative staff of staff on key wellbeing factors;
- Present a summary of staff opinions and feedback;
- Make recommendations based on the quantitative and qualitative findings.

This presentation will present some of the findings from this review

Paper 3: Child Abuse Investigation: Protecting Officers and Staff.

Noreen Tehrani^{1,2}, Nicky Piper³

¹*Noreen Tehrani Associates, London, UK*, ²*Professional Development Foundation, London, UK*, ³*Metropolitan Police, London, UK*

London's Metropolitan Police Child Abuse Investigation Command employs over 600 officers and staff and is part of the Specialist Crime and Operations Directorate. In addition to sixteen London borough Child Abuse Investigation Teams, there are some sixty officers and staff involved in investigating the activities of organised on-line child sex abusers and others involved in the manufacture and distribution of child abuse images. This work is supported by a computer forensic team providing intelligence on offender activities, covert on-line investigations and officers involved in interviewing offenders and their child victims.

In March 2011, a review was conducted by the presenter, the then Head of the Paedophile Unit, into the risks that this work presented to staff and the mechanism required to manage that risk. Although there had been a programme of support provided by Occupational Health, it was now felt that a more scientific approach was needed which provided anonymised management information to be used to reduce the trauma risks. Previous research had indicated that this work presented a risk and that dealing with child sex abuse involved many variables which could only be managed using a holistic approach and skilled professionals. With the support of a specialist psychologist and criminologist a comprehensive review was undertaken to identify who needed support and what kind of support would be most effective. The adopted programme was reviewed by the Association of Chief Police Officers (ACPO) and recognised as best practice.

Over the past two years each officer within the Directorate has gone through a comprehensive psychological screening involving the use of psychometric questionnaires and a structured interview. This initial screening has been followed up with regular follow up screening. This presentation will provide results from the screening and evidence of the factors which lead to increased resilience and the organizational and performance benefits that have resulted.

Paper 4: Trauma Therapy: Providing Therapy as Part of an Organizationally Informed Intervention.

Noreen Tehrani^{1,2}, Emma Wray³

¹*Noreen Tehrani Associates, London, UK*, ²*Professional Development Foundation, London, UK*, ³*Thames Valley Police, Thames Valley, UK*

The final paper looks at the provision of a model trauma therapy and trauma therapy delivery, which has been tailored to meet the needs of Thames Valley Police. The nature of policing means that at times police officers and staff will experience traumatic events at work. Thames

Valley Police take their duty to provide appropriate immediate support to officers and staff seriously and have recently been working together with their Occupational Health Psychologist to develop a comprehensive model of support.

It was found that although there were counsellors providing a range of trauma therapies these did not always meet the needs and were not integrated with the post trauma services provided by their Corporate Health Department (Occupational Health and Welfare).

In March 2013, a new service was introduced using trauma therapists who were all trained and skilled in delivering a Trauma Focussed CBT model of trauma support. These therapists had been selected for their experience and skills and willingness to work in a way that met the needs of their clients and the organization. In this programme the trauma therapy team work together with the Occupational Professionals to ensure the best possible service for traumatised officers and staff. The presentation will describe the approach and sharing the results of the first year of the programme. These results include:

- Improvements in clinical scores;
- Satisfaction levels;
- Improvement in performance in work.

Symposium Title: New Research Trends on Proactivity at Work.

Despoina Xanthopoulou¹, Ana Isabel Sanz-Vergel², Evangelia Demerouti³

¹*Aristotle University of Thessaloniki, Thessaloniki, Greece,* ²*University of East Anglia, Norwich Business School, Norwich, UK,* ³*Eindhoven University of Technology, Eindhoven, The Netherlands*

Employees are not passive agents in organizations. Rather, they actively try to develop their capabilities and shape their work environment in order to achieve person-job fit. In this context, scholars have started to focus on proactive behaviours and whether these could help employees to increase their well-being and adaptive performance. Previous empirical evidence suggests that proactivity at work has positive effects for both the individual and the organization. However, this evidence does not fully explain the psychological processes that link the causes and consequences of proactivity at work. In an attempt to cover this void, this symposium presents five studies that concern proactive behaviours at work both with regards to personal development and job redesign, and to advancing theory by focusing on inter- and intra-individual processes.

The symposium opens with an intervention study that focuses on employees' proactive behaviours to enhance personal growth in the workplace. Its preliminary results suggest that employees who actively try to use their strengths at work are more motivated than those who try to improve their weakness. The following four studies concern proactivity with regard to job redesign. A diary study focuses on employees' daily job crafting behaviours (i.e., actively seeking for job resources and challenges, and attempts to decrease job demands) and examine how these relate to flow at work and during leisure. Furthermore, the mediating role of cognitive weariness in the spill over of flow is investigated in order to explain the differential effects of job crafting on employee well-being.

A second study focuses on dyads of colleagues and investigates the detrimental effect of employees' attempts to decrease their job demands for their colleagues' burnout levels. Their results suggest that the positive relationship between attempts to decrease demands and colleagues' burnout is explained by colleagues' perceived workload and experienced conflict. In a similar vein, another study uses a dyadic approach to analyse whether job crafting behaviours may be imitated by direct colleagues, and how this crossover may affect employees' levels of work engagement.

Finally, the last study applies a longitudinal qualitative design in order to investigate boundary-spanners' decisions to craft their job. Data triangulation would allow drawing a complete picture on the way that job crafting decisions may facilitate or inhibit collaboration among colleagues. This symposium invites critical analysis of the contribution of these studies to further theory and practice.

Paper 1: Building Strengths Or Improving Weaknesses: That Is The Question.

Wido G.M. Oerlemans¹, Marianne van Woerkom², Arnold B. Bakker¹

¹*Erasmus University Rotterdam, Rotterdam, The Netherlands,* ²*Tilburg University, Tilburg, The Netherlands*

Conventional methods of human resource development are often based on a deficiency model and focus on identifying and closing the gap between current and desired levels of performance. Although this may lead to performance improvement, a one-sided emphasis on employees' deficits may be demoralising because it implicitly asks people to be good at something they are not. The positive psychology approach has created an awareness that workplaces are in need of a more balanced approach that takes into consideration both the positive and the negative, both building on strengths and trying to correct weaknesses. Strengths are defined as patterns of thought, feelings and behaviour that are energising and which lead to maximal effectiveness. Yet, there is – to our knowledge - no empirical evidence available showing that a strength approach in the workplace is more beneficial in terms of psychological wellbeing and performance than a deficiency approach.

The present intervention study compared if identifying and using one's strengths in the workplace is more effective in terms of personal growth in psychological wellbeing and performance as compared to identifying and improving on one's weaknesses, or doing nothing.

One hundred Dutch employees were randomly distributed across four groups: (a) a strength group, (b) a combination group, (c) a weaknesses group, and (d) a control group. The strength group worked on identifying and using two of their strengths at work; the combination group worked on identifying and using one strength and identifying and improving one weakness at work; the weaknesses group worked on identifying and improving two weaknesses at work, and the control group did not participate in any intervention. The length of the intervention study was six consecutive workweeks. To date, 66 employees have completed the full intervention.

Preliminary repeated-measures analyses suggest that the strength group experienced a larger growth in psychological capital (a combination of hope, self-efficacy, optimism, and resilience) and intrinsic motivation over the course of six weeks as compared to the other groups.

Paper 2: Job Crafting and Flow at Work and After Work: A Diary Study on the Role of Cognitive Weariness.

Despoina Xanthopoulou

Aristotle University of Thessaloniki, Thessaloniki, Greece

The aim of this study was to investigate how daily proactive work behaviours facilitate optimal employee functioning during and after work. Daily proactive behaviours were operationalised as job crafting. Job crafting concerns employees' daily attempts to seek for more resources in their work environment (e.g., colleague and supervisor support), to seek for more challenges (e.g., more interesting tasks), and to decrease their job demands (e.g., avoid emotionally demanding interactions).

Previous research indicated that within-employee changes in job crafting explain daily work engagement. Building on these initial findings, this study goes a step further and investigates the differential effects of job crafting behaviours on employee daily flow at work and after work, as well as the mediating role of cognitive weariness in this spill over process. In line with the job demands-resource model, it was hypothesised that on days that employees try actively to look for or create more resources in their work environment, as well as on days that they look for more challenges, they will be more likely to reach flow (i.e., feelings of enjoyment, intrinsic motivation, and absorption in the work task). In contrast, on days that employees try to decrease their job demands, they will exhibit lower levels of flow because such behaviours are likely to reduce triggers for action. Also, it was hypothesised that employees who reach flow at work will be less likely to experience cognitive weariness at the end of the workday that in turn, would make flow experiences during leisure time more feasible.

A diary study was conducted among a heterogeneous sample of 30 Greek employees. Participants were followed up for five consecutive workdays, right after work and at bedtime. Multilevel analyses showed that only daily attempts to seek for job resources related positively to daily flow, while behaviours that concerned decreasing demands or seeking challenges were unrelated to flow at work. In contrast, on the days that employees looked for more challenges and tried to decrease their job demands, they were more likely to show higher levels of cognitive weariness at the end of the workday. Furthermore, flow at work had a positive indirect relationship with flow during leisure time via its negative relationship with cognitive weariness.

These results shed light on the psychological processes that are initiated by daily job crafting behaviours and emphasise the important role of resources seeking for daily employee well-being during and after work.

Paper 3: When Job Crafting Relates Negatively to the Well-Being of Colleagues.

Maria Tims, Arnold B. Bakker, Daantje Derks

Erasmus University Rotterdam, Rotterdam, The Netherlands

Employees are actively involved in constructing their own jobs. For example, employees may proactively change their job demands and job resources, which are referred to as job crafting. Previous job crafting research has mainly focused on the relationship between job crafting and employee well-being. However, little is known about the relationship between job crafting and the well-being of colleagues with whom the job crafter collaborates. The present study extends this literature by examining whether job crafting of person A is related to the well-being of person B.

Since previous research has provided mixed findings regarding the job crafting strategy of decreasing one's job demands, we focus on this job crafting type. Through decreasing job demands, employees try to make their own work less demanding. Consequently, colleagues may feel that their job has become more demanding because they need to take over certain tasks from the job crafter. We focus on the outcome variable 'burnout' of the colleague, characterized by exhaustion (i.e., work-related fatigue) and disengagement (i.e., a distant and negative attitude toward work). Furthermore, it was hypothesised that workload of B (Hypothesis 1) and conflict reported by B (Hypothesis 2) mediated the relationship between decreasing job demands of A and burnout of B.

Data from 103 dyads of employees was analysed to test our research question. Using Kenny's actor-partner interdependence model of indistinguishable dyads, we found support for hypothesis 1: decreasing demanding aspects of the job by A was associated with increased workload of B. Workload of B, in turn, related to burnout of B. With regard to hypothesis 2, conflict of B indeed mediated the relationship between decreasing job demands of A and disengagement of B (not exhaustion of B). In addition to this hypothesised relationship, we found that conflict of A also mediated the relationship between decreasing job demands of A and disengagement of A.

Interpreting these findings in light of previous studies, these results may suggest that decreasing job demands should receive more attention from managers and researchers as it appears to be associated with changes in the workload of colleagues and conflict among colleagues. Assuming that this type of job crafting may be used by individual employees to reduce strains at work, teams should be provided with guidelines about the way individual members may craft their jobs.

Paper 4: When Colleagues Imitate Job Crafting Behaviors: Implications For Work Engagement.

Ana Isabel Sanz-Vergel¹, Arnold B. Bakker², Alfredo Rodríguez-Muñoz³

¹University of East Anglia, Norwich Business School, Norwich, UK, ²Erasmus University Rotterdam, Rotterdam, The Netherlands, ³Complutense University of Madrid, Madrid, Spain

Traditional and contemporary theories of work design propose that all employees can exert some influence on their work environment, even in the most restricted jobs. Employees may proactively change the work environment by shaping or redefining aspects of the job. The majority of studies have focused on the impact of employee's job crafting behaviours on individual outcomes.

We aim to expand this literature by investigating the impact of job crafting on one's direct colleague. Following the JD-R approach to job crafting developed by Tims and colleagues, we focus on four dimensions, namely: (1) increasing structural resources, (2) increasing social resources, (3) increasing challenge demands, and (4) decreasing hindering demands. We use Bandura's social cognitive theory to argue that employees may imitate each other's job crafting behaviours, and influence each other's work engagement. By observing their co-workers, employees can infer which behaviours are appropriate and rewarding in the workplace. This motivates the same behaviour. Thus, when people see a co-worker engage in job crafting activities, they may engage in this behaviour too while working on their own tasks.

The sample of the present study was composed of 206 employees (103 dyads) from seven different companies. The participants completed a questionnaire via an online survey platform. Our findings largely supported our hypotheses. Specifically, results showed that the crafting of social and structural job resources, and the crafting of challenge job demands was positively related to own work engagement, whereas decreasing hindrance job demands was unrelated to own engagement. As predicted, results showed a reciprocal relationship between all job crafting dimensions. Finally, actor's job crafting was related to partner's work engagement through partner's job crafting, suggesting a modelling process.

The overall pattern of these results shows that job crafting is not only an individual phenomenon but also an interpersonal phenomenon. Job crafting may be imitated and in turn, may have a positive impact on work engagement. From a practical point of view, our results highlight the importance of creating effective role models at work, given that individuals' work behaviours may be imitated by their direct colleagues.

Paper 5: An Examination into the Proactive Crafting Of Their Jobs by Employees Who Work Across Organizational Boundaries.

Rachel Nayani, Kevin Daniels

University of East Anglia, Norwich Business School, Norwich, UK

The proactive crafting of their jobs by employees alters the design of the job and the social environment of work (Wrzesniewski & Dutton, 2001). This study explores the dynamics and processes that inform and are informed by job crafting, by those who work together across organizational boundaries, termed boundary-spanners (Aldrich & Herker, 1977).

In applying a longitudinal qualitative design, we aim to understand the role job crafting plays in boundary-spanners' decisions in respect of collective working such as acting in self-interest, or for the good of the collective or a dyad within it, at the expense of self-interest. Therefore this study aims to relate proactivity at work to inter-organizational collaboration. In the presentation, we will report emerging findings from the study.

We will undertake a multiple case-study longitudinal approach using qualitative methods with a sample of around 20 employees. Within each case (three cases), we have identified a small group of employees in an inter-organizational work domain with individuals who regularly work together. We will conduct bi-monthly semi-structured interviews with each of these participants. Interviews will be focused on proactive attempts by employees to shape their jobs and their responses to the ways in which others shaped their jobs. The participants will also undertake to complete 'reflective logs' recording their proactive attempts to shape their jobs – their thoughts and feelings about their work, and the barriers and enablers they perceived to their proactive attempts. We will use event reconstruction techniques to facilitate recall and the reflective logs to guide and prompt each interview. Interviews will be recorded and verbatim transcribed. We will triangulate interview data by non-participant observation in meetings, review of organizational documentation such as policies, procedures, terms of reference and job descriptions in respect of inter-organizational working. Semi-structured interviews will be conducted with each organizational sponsor at two points in time.

Analysis will begin with data reduction and display, comprising cognitive mapping techniques, causal mapping, textual coding and analysis, such as frequency intensity of key and emerging concepts. Additionally each case will be described in narrative form. Cross-case comparison and iteration will be undertaken at each time point. Inter-rater comparison of coding and interpretation will be undertaken on interview transcripts. Analysis will focus on the content of proactive practices; the identification of relationships between constructs such as motivation, opportunity and identity; and the contextual factors that enhance or inhibit crafting.

Symposium Title: Managing Implementation - The Roles of Line Managers, Senior Managers, HR Professionals and Employees in Occupational Health Interventions.

Ulrica von Thiele Schwarz^{1,2}, Henna Hasson¹

¹Karolinska Institutet, Stockholm, Sweden, ²Stockholm University, Stockholm, Sweden

The implementation of organizational interventions is a complex process which generally involves many actors across an organization. Stakeholders identified as key actors in occupational health interventions include senior managers, line managers, employees, HR professionals and consultants. They have a huge potential to impact the intervention's implementation and outcomes. In line with this, the importance of exploring the roles, behaviours, power and involvement of these actors has been emphasised. However, empirical data illuminating this has, so far, been limited.

The aim of this symposium is to explore the roles of different key actors involved in occupational health interventions. The symposium includes four different empirical studies that look at those involved in managing implementation from different perspectives.

In the first presentation, we take a broad approach to understanding the role of senior managers, line managers, HR professional and consultants by having them describe their own, as well as others' roles. This is based on interview data from several larger organizations implementing a web-based intervention. The results show, among other things, the importance of alignment between different actors and managerial levels.

We will further explore this in the second presentation, by taking a closer look at the actions and interactions of line managers and senior managers. This is based on data from a multilevel participatory project involving small and medium sized enterprises.

In the third presentation, the focus is on how line manager's readiness for change evolves over the course of a stress management intervention. This presentation offers insight into interactions between different contextual factors and line managers perceptions of the intervention.

In the fourth presentation, we will build further on the participatory approach by considering the role of line managers working with employees to craft the intervention.

The symposium, thus, aims to furthering our understanding of the perceptions and actions of key stakeholders. This may offer useful knowledge on how these actors drive and shape intervention processes. However, it also aims to raise questions regarding whether interventions should be managed at all, or, rather crafted or co-created. In addition it aims to explore whether any general conclusions about the management of interventions can be drawn, or if they are intervention-context specific. This is one of three symposia submitted by the International organizational health intervention research partnership.

Paper 1: Expectations Meet Reality – Line Managers, HR Professionals and Senior Managers Views on Their Respective Roles and Role Fulfilment in Occupational Health Interventions.

Henna Hasson, Kristina Palm, Karin Villaume, Ulrica von Thiele Schwarz
Karolinska institutet, Stockholm, Sweden

Background: Understanding perceptions of key stakeholders in an implementation process may offer useful knowledge on how these actors drive and shape intervention processes. However, little attention has been given to how these key actors themselves perceive their roles, tasks and responsibilities. In turn this limits our understanding of how the management of the implementation of occupational health interventions can be improved.

Objective: This study contrasted line managers', senior managers' and HR professionals' descriptions of their roles, tasks and ability to perform them during implementation of an occupational health intervention.

Methods: The study was a part of a longitudinal occupational health intervention conducted at nine organizations in Sweden. Data are drawn from interviews with line managers (n= 13), senior managers (n= 7) and HR professionals (n= 9) six months after initiation of an occupational health intervention at the nine organizations (between October 2011 and May 2012). The intervention was an interactive web-based system that consisted of risk evaluations and health-promotion and occupational health tools at individual and group level.

Results: Line managers, senior managers and HR professionals generally described each other's and their own roles in a coherent fashion. However, HR professionals described a more comprehensive role for themselves than was described by the other stakeholders. The descriptions of the roles were generally in line with the roles and tasks that prior research has described for these actors. The results also show that these actors seldom managed to perform according to these roles in practice. Two main reasons for the suboptimal performance of roles appeared: organizations' use of individuals' engagement rather than creating a strategy for the implementation, and a lack of integration of the intervention across relevant vertical stakeholders and organizational processes.

Conclusions: Evaluation of stakeholders' perceptions of each other's and their own roles is important, especially concerning HR professionals. Clear role descriptions and implementation strategies, and aligning an intervention to organizational processes, are crucial for efficient intervention management.

Paper 2: Responsibilities and Commitment of Top Management and First Line Management in Organizational-Level Interventions – What Difference Does it Make?

Liv Gish, Christine Ipsen, Signe Poulsen

Technical University of Denmark, Copenhagen, Denmark

Researchers advocate that interventions should apply a participatory approach i.e. employee participation. It is also widely recognised that top management's support is an important part of a successful intervention implementation. Lately there has been a request for multi-level intervention studies where the first line managers also participate in the intervention. In a recently completed intervention study we developed a multi-level participatory intervention model for use in small and medium sized enterprises (SMEs).

The hypothesis was that multi-level participation would secure process momentum and increase chances of successful implementation. Four SMEs participated in the study. The typical intervention construct was that top management initiated the intervention and first line managers had to manage the intervention on a daily basis together with two selected employees who acted as in-house facilitators. The involvement of both top management and first line management gave rise to the opportunity to review the differences in responsibilities and commitment between the two and the interaction between them.

The study showed that a prerequisite for optimal implementation was an initial matching of expectations between top management and first line management. The top manager's most important responsibilities were to ensure that the first line manager understood the purpose of the intervention, and to support the first line manager's dispositions through the intervention. The first line manager's most important responsibilities were to continuously focus on the process and secure momentum. This was done by allocating the necessary resources, supporting the in-house facilitator by having regular meetings with them, by continuously giving feedback to the employees about the intervention, by continuously evaluating the intervention and making the necessary adjustments, by integrating the selected intervention activities in daily operations, and by making the value of the changes visible.

In the companies with the least implementation success, it was observed that the first line managers failed in committing to the project. These managers prioritised daily operations rather than the intervention despite allocated resources and top management's attention. In two of the companies a handover of commitment and responsibility from top management to first line management succeeded and in the two other companies it failed. In the successful cases the first line managers embraced the responsibility and stayed loyal to the intervention model. These findings suggest that both top management's and first line management's commitment to interventions is crucial, but first line managers are especially responsible for the daily implementation.

Paper 3: Supervisor's Health-Oriented Readiness for Change in the Context of a Multilevel Stress Management Intervention Project: Determinants of Baseline Levels and of Longitudinal Change Patterns.

Désirée Füllemann¹, Gregor Jenny^{1,2}, Rebecca Brauchli^{1,2}, Georg Bauer^{1,2}

¹*Public and Organizational Health, Center for Organizational and Occupational Sciences, ETH Zurich, Zurich, Switzerland,* ²*Division Public and Organizational Health, Institute of Social and Preventive Medicine, University of Zurich, Zurich, Switzerland*

The present study aims to investigate supervisors' health-oriented readiness for change (RfC) in the context of an organizational multilevel stress management project. More specifically, it examines the determining factors of pre-intervention levels and different change patterns in supervisors' RfC over the period of the stress management project in an explorative manner.

Background: RfC is seen as a crucial prerequisite for successful implementation of organizational changes (e.g. Kotter, 1996). Individual health-oriented RfC is defined as individuals' readiness to implement change targeting one's own health behaviour and a health promoting work environment (Müller, Jenny, & Bauer, 2012). Moreover, supervisors are an important group for supporting and facilitating health-oriented change projects in organizations. Hence, supervisors' RfC is of utmost importance in this regard. Yet, RfC of supervisors and their determining factors have not been subject to empirical examination (e.g. Biron & Karanika-Murray, 2013).

Method: The study employs data of a longitudinal multilevel stress management project conducted in eight medium and large organizations in Switzerland between 2008 and 2010. Cross-sectionally, n =903/ 778/ 694 supervisors filled out the questionnaires at t0, t1, and t2, respectively. The longitudinal panel sample consisted of n =503 supervisors who filled out the questionnaire at least at t0 and t2. Supervisors' RfC was assessed with an 8 item-scale by Müller et al. (2012) assessing individual and organizational health-oriented RfC (Cronbach's $\alpha = .77$).

Additionally, the questionnaires included various socio-demographic variables, scales of work characteristics (job demands and resources), personal resources (e.g. occupational self-efficacy), and health and well-being measures (e.g. work engagement). Data will be analysed by correlations, linear regression analyses, and if applicable (when using latent factors for job demands and resources) structural equation modelling.

Results: Results will demonstrate which socio-demographic variables, personal and job characteristics are associated with supervisors' RfC concerning health-oriented interventions at work. Moreover, results will indicate which of these variables are related with patterns of change in RfC, namely positive change, stability, and negative change in RfC over the period of the intervention project.

Discussion: This paper addresses the symposium topic by focussing on RfC of supervisors, who represent an important stakeholder group as regards the successful implementation of occupational health interventions. Implications for the implementation of future intervention projects will be addressed.

Paper 4: Employees and Line Managers as Actively Crafting Organizational-Level Interventions.

Karina Nielsen

Norwich Business School; University of East Anglia, Norwich, UK

Organizational-level interventions have often been evaluated within the natural science paradigm, in much the same way as drug effectiveness trials or other medical interventions. In practice, organizational constraints mean that quasi-experiments are most frequently used to evaluate such interventions (Carter et al., 2013). Most often interventions focus on outcome evaluation – the assessment of the effects of intervention upon the populations they are intended to benefit (Lipsey & Cordray, 2000; Rychetnik et al., 2002) at the expense of process.

Although process evaluation is increasingly popular, frameworks have been adopted from the public health domain where the focus is on whether the intervention is delivered according to plan (dose delivered, dose received, and description of the intervention etc., Nielsen, 2013). This is a problem as most organizational-level interventions employ a participatory design (Nielsen et al., 2010) and thus the intervention content is rarely defined at the start of the intervention but will be defined in collaboration between employees and (line) managers.

There is growing evidence that both employees and line managers can either make or break an intervention. There is, therefore, a need to develop a greater understanding of how organizational-level interventions are implemented, to consider the specific participatory nature

of such interventions, and how we can ensure the active involvement of both employees and line managers (Nielsen, 2013). An additional problem with current intervention research is that most research often depends on the retrospective evaluation of what has happened, and there has been limited discussion of how we may use this information to inform future intervention studies. In addition, nor does there appear to have been any attempt to apply psychological theories to understand the findings of existing studies.

The presentation will provide empirical examples of how the active crafting of employees and line managers, influences intervention implementation. Psychological theories such as; collective job crafting (Nielsen & Abildgaard, 2012), social identity theory (Haslam et al., 2009) (of leadership (Hogg, 2001), conservation of resources (Hobfoll, 1989), and broaden-and-build theory (Fredrickson, 2001) will be discussed. Finally how this knowledge can be integrated into future intervention designs to minimise the risk of interventions failing due to poor design and implementation will be explored.

Symposium Title: Interdisciplinary Approaches in Occupational Health Psychology Research in the Canadian Military Context: From Data Analysis to Program Refinement.

Jennifer Lee

Department of National Defence, Ottawa, Ontario, Canada

The value of interdisciplinary approaches to improving the quality of life and well-being of workers has long been recognised in occupational health psychology. Drawing from multiple disciplines ensures that more comprehensive approaches are developed to address the range of factors and processes that shape worker well-being. As a high-risk occupation, service in the military involves some additional challenges. Beyond conventional work stressors (e.g., work overload, low decisional control, work/life imbalance), military personnel may face traumatic experiences as a result of their work in combat operations and they may be required to perform physically demanding tasks under extreme stress or environmental conditions. Because of the complexity of challenges they face, interdisciplinary research on worker well-being in this context is all the more critical. This aim of this symposium is to present recent interdisciplinary research that has been conducted at the Department of National Defence in support of the Canadian Armed Forces (CAF).

The first two presentations provide examples of how epidemiological approaches have been used to provide added analytical rigour in research in occupational health psychology. First, poisson regression is applied to longitudinal data to understand pre-military psychological risk factors, such as mental health symptoms, for poor health among service members returning from overseas deployment.

Next, survival analysis is used to explore the implications of service-related mental health problems on time-dependent outcomes such as continued fitness for duty. Research in these areas serves an important purpose for individual service members and the CAF alike by helping to identify ideal targets and time points for interventions aimed at improving worker well-being and performance.

Complementing this work, the final two presentations focus on applied research that was conducted to evaluate educational programs aimed at improving stress management and facilitating successful post-deployment reintegration among CAF personnel. Together, these presentations serve as prime examples of how interdisciplinary approaches may be used to both examine and develop strategies to address key occupational health psychology issues in the military context.

Paper 1: Pre-military Mental Health Symptoms as Risk Factors for Post-Concussive Symptoms among Canadian Military Personnel Returning From Overseas Deployment.

Jennifer Lee, Bryan Garber, Mark Zamorski

Department of National Defence, Ottawa, Ontario, Canada

Introduction: The longer-term health impacts of mild traumatic brain injury (mTBI) have been the focus of a considerable number of studies of service members returning from deployment in the wars in Afghanistan and Iraq. Among some of the key challenges to understanding the aetiology of later onset mTBI symptoms, such as post-concussive symptoms (PCS), is their strong relationship with mental health symptoms. In particular, cross-sectional analyses have made it difficult to determine whether existing mental health problems increase the risk of PCS or whether PCS exacerbate mental health symptoms. To address this gap, the relationship between pre-military mental health and PCS was examined in Canadian military personnel returning from deployment in support of the mission in Afghanistan.

Method: An analysis of data collected from 3319 Canadian military personnel during basic training and upon routine post-deployment screening was conducted. Poisson regression analyses were performed with demographic covariates, pre-military mental health symptoms, combat experiences and TBI during deployment, and post-deployment mental health symptoms as predictors of PCS.

Results: Pre-military posttraumatic stress disorder (PTSD) and somatic symptoms were found to predict PCS even when accounting for the contributions of combat experiences and TBI during deployment. When post-deployment mental health symptoms were added to the model, however, only pre-military somatic symptoms remained in the model. Post-deployment mental health symptoms were strongly associated with PCS.

Conclusion: Taken together, these results provide compelling evidence that pre-military mental health symptoms may serve as risk factors for PCS even when the occurrence of an actual TBI during deployment is considered. The stronger relationship of post-deployment mental health symptoms with PCS could be indicative of co-morbidity, but could also result from limitations inherent to the cross-sectional nature of analyses of this relationship.

Paper 2: Occupational Outcomes After Diagnosis of a Deployment-Related Mental Disorder in a Large Cohort of Canadian Armed Forces Personnel: A Survival Analysis Approach.

David Boulos, Mark Zamorski

Department of National Defence, Ottawa, Ontario, Canada

Introduction: An important minority of deployed personnel will be diagnosed with a deployment-related mental disorder (DRMD). Mental disorders can interfere with stringent military health and fitness standards, and concerns about career impact are a common barrier to care-seeking. The Canadian Armed Forces (CAF) has invested heavily in mental health over the past decade and has implemented forward-thinking fitness standards. However, data on how DRMD's affect occupational fitness is limited. The current study uses survival analysis techniques to investigate occupational outcomes among a cohort of individuals who returned from deployment in support of the mission in Afghanistan.

Methods: The study population consisted of all 30,513 CAF personnel who were deployed in support of the mission in Afghanistan from 2001 - 2008. Mental disorder diagnoses and deployment attribution were abstracted from medical records of a weighted stratified random sample of 2,014 personnel. Lack of fitness for ongoing military service, defined by career-limiting medical employment limitations, was determined using administrative data. Cox proportional hazards regression assessed the independent effect of mental disorder diagnoses on risk of developing these employment limitations.

Results: An estimated 13.5% of the population was diagnosed by the CAF with an Afghanistan-related mental disorder (ARMD) diagnosis over a median period of follow-up of 1364 days; an additional 5.5% had a mental disorder diagnosis unrelated to this mission.

48% of those with an ARMD developed career-limiting medical employment limitations over a median of 1528 days of post-deployment follow-up. In comparison, 33% of those with a mental disorder diagnosis that was not Afghanistan-related and 12.7% of those without a mental disorder diagnosis developed such limitations, over 1930 and 1898 days of follow-up, respectively.

After a decade of follow-up, the predicted cumulative incidence of such limitations approaches 70% among those with an ARMD compared with 40% among those with a mental disorder diagnosis unrelated to the Afghanistan mission and 20% among those without a mental disorder diagnosis. Proportional hazards modelling indicated that individuals with an ARMD were associated with a marked increase in risk of developing limitations (almost five-fold higher than those without a mental disorder diagnosis) while those with a mental disorder having other attributions had an elevated risk as well.

Conclusions: A large fraction of CAF personnel with a service-related mental disorder will ultimately develop career-limiting medical employment limitations, even in the face of improvements in mental health care and forward-thinking fitness standards.

Paper 3: Challenges and Opportunities for Stress Management in the Military Context: Highlights of the 'Stress: Take Charge!' Evaluation Results.

Jennifer Born, Jennifer Lee, Andrena Pierre, Christine Dubiniecki
Department of National Defence, Ottawa, Ontario, Canada

Introduction: In addition to a higher risk of exposure to traumatic events, military personnel routinely face multiple stressors, including high operational and personnel tempo, separation from friends and family, and frequent moves. Offering stress management courses in this context is therefore critical in addressing the needs of this workforce. One course that is available to both Canadian Armed Forces (CAF) and civilian defence personnel is 'Stress: Take Charge!' (STC). Recently, a comprehensive evaluation of STC was conducted. Beyond determining whether STC might help participants improve their stress management knowledge, self-efficacy and skills, the aim was to identify possible barriers to its implementation.

Method: The evaluation relied on multiple methods and data sources (administrative data, stakeholder interviews, facilitator surveys, participant surveys). A total of 56 STC courses conducted at military bases across Canada between October 2012 and October 2013 were included in the evaluation.

Results: The findings pointed to important variations in the implementation of STC, with some bases offering longer sessions over a short period of time, and others offering shorter sessions over a longer period of time. Results of interviews with course organisers at 10 CAF bases underlined some challenges with implementing STC consistently, including participant scheduling problems due to high workload. As well, many facilitators reported the need to tailor the course for the specific needs of personnel at their base. Nonetheless, STC participants (n = 496) demonstrated significant improvements in their stress management knowledge, self-efficacy, and skills.

Conclusion: The results of this evaluation underscore some of the challenges of implementing stress management programs consistently in contexts involving multiple geographical locations and high personnel or operational tempo. At the same time, they provide support for the potential value of such programs.

Paper 4: Evaluation of a New Educational Program Delivered During A Third-Location Decompression Program For Canadian Armed Forces (CAF) Personnel Returning From Afghanistan.

Mark Zamorski, Bryan Garber, Suzanne Bailey, Kim Guest, David Boulos
Department of National Defence, Ottawa, Ontario, Canada

Background: Programs such as Canada's Third-location Decompression (TLD) program are designed to ease reintegration after difficult military deployments. In 2010, Canada introduced a new educational program better aligned with the rest of its "Road to Mental Readiness" mental health education and training program. This study assesses the perceived value and impact of the new program relative to the old one.

Method: Subjects were 22,113 personnel participating in TLD after deployment in Kandahar, Afghanistan. 3,024 received the new program. Subjects completed an evaluation form capturing the perceived value of its educational component, along with questions on attitudes towards mental health and self-efficacy about managing transition problems. Logistic regression explored the association of the new program with outcomes.

Results: Those completing the new program were significantly more satisfied with the educational program (adjusted odds ratio, 3.8, 95% confidence interval = 3.2 – 4.5), and they perceived the TLD as a whole to be more valuable (adjusted OR = 1.8, 1.6 – 2.0). Nearly all attitude and self-efficacy items at the end of TLD favoured the new program, with Cohen's d (a standardised measure of effect size) ranging from -0.03 to +0.34. Those who had previously completed the old program found TLD under the new program to be significantly more valuable.

Interpretation: All indicators point to the clear and substantial superiority of the new educational program over the old one. The primary limitation of this analysis is the use of a quasi-experimental approach. It is conceivable that the observed differences were due to factors other than the change in the educational program. In addition, we measured only short-term educational outcomes rather than longer-term impacts on the transition process or on well-being. Notwithstanding these limitations, the CAF views this as sufficiently strong evidence to support the continued use of the new program. The CAF's new post-deployment education program (and its TLD program as a whole) may have relevance to personnel in other high-risk occupations.

Paper 5: The Relationship between Occupational Factors and Mental Health in a Military Population.

Christine Dubiniecki
Department of National Defence (Canada), Ottawa, Ontario, Canada

Introduction: Military personnel face unique occupational pressures that may impact their mental health and wellbeing. Poor mental health may lead to decreased work performance, decreased operational readiness, a reduced ability to cope with unique military demands, and an increased rate of military attrition. The aim of this study is to determine whether job stressors, such as lengthy periods away from home, work-related injuries, presenteeism, self-perceived work performance, and general job satisfaction are associated with poor mental health outcomes among military personnel.

Methods: Data from the Canadian Forces Health and Lifestyle Information Survey 2008/09 were analysed to examine the relationship between demographic and occupational factors and mental health in a military population. In total 4,744 surveys were sent to a stratified sample of Canadian Forces personnel which resulted in 2,157 usable surveys (response rate= 48.8%). Occupational factors assessed included: job satisfaction; self-perceived work performance; presenteeism; time away from home; and, military deployment in the previous 2 years. Mental health outcomes included psychological distress, depression, and post-traumatic stress disorder (PTSD).

Results: Bivariate analyses demonstrated that a higher proportion of CAF personnel with probable depression, psychological distress, and PTSD were less satisfied with their jobs than CAF personnel without these mental health disorders. Overseas deployment in the last 2 years and less than 12 months between deployments were not associated with poor mental health. Personnel that reported having a serious injury in the past year were more likely to have depression than those that did not suffer a serious injury.

Conclusions: Among CAF personnel, job dissatisfaction and recent serious injury were associated with poor mental health; however, further research is needed to determine the direction of this relationship.

Symposium Title: Wellbeing in Academic Employees: An International Perspective.

Gail Kinman

University of Bedfordshire, Bedfordshire, UK

Research examining the work-related wellbeing of academic employees in several countries has highlighted a range of generic and job-specific stressors, a high incidence of work-life conflict and comparatively high levels of psychological distress (e.g. Kinman & Jones, 2007, 2008, 2013; Tytherleigh et al. 2005; Winefield et al. 2008).

This symposium presents studies conducted in the UK, Ireland and Australia in order to examine work-related wellbeing in academic employees, the variables that predict it and the ways in which it might be managed. Four papers are included that draw on a range of quantitative and qualitative methodologies. The performance of key models of job-related stress, such as the effort-reward imbalance model, the job demand, control, support model and the job demands resources model, are tested as predictors of several strain outcomes such as perceived stress, work-life conflict, job satisfaction and leaving intentions. The role played by key individual difference factors, such as job involvement and over-commitment, which have been identified as risk factors for academic wellbeing is examined. Moreover, interventions that have the potential to enhance wellbeing in Universities are evaluated.

Paper 1 draws on longitudinal data conducted in UK universities. It extends knowledge of the Effort-Reward Imbalance Model (Siegrist, 1996) by examining the main and interactive effects of job-related efforts, over-commitment and the three individual reward components (i.e. promotion/salary, esteem and job security) and over-commitment in predicting psychological distress, work-life conflict, job satisfaction and leaving intentions.

Paper 2 also utilises key models of job-related stress by comparing the performance of the Job Demands Resources and the Job Demand Control Support Models in predicting perceived stress in a large, representative sample of academics working in UK Universities. Previous research suggests that academics have particular problems managing the work-home interface and this may be exacerbated by excessive involvement in the job role.

Paper 3 utilises a daily diary methodology to examine the relationship between different aspects of workaholism and post-work recovery and detachment from work in an academic setting.

The final paper investigates the impact of key human resource (HR) stress and well-being interventions implemented at five Australian universities on employees' psychological strain and work attitudinal outcomes. The implications of the findings for enhancing the wellbeing of academic employees in University settings will be discussed and priorities for further research identified.

Paper 1: Effort-Reward Imbalance and Wellbeing in Academic Employees: Different Rewards, Different Outcomes.

Gail Kinman

University of Bedfordshire, Bedfordshire, UK

Previous research has found significant relationships between effort-reward imbalance (ERI) and over-commitment and various strain outcomes in academic employees (Kinman & Jones, 2008). The majority of studies that have tested the ERI model however, utilise an aggregate measure of job-related rewards and draw upon cross sectional data. The present study examines the main and interactive effects of job-related efforts and the three individual reward components (promotion/salary, esteem and job security) and over-commitment in predicting psychological distress, work-life conflict, job satisfaction and leaving intentions in a sample of academic employees over time.

Data were collected at Time 1 from 764 academic employees working in UK universities. Participants completed measures of effort-reward imbalance and over-commitment (Siegrist, 1996), psychological distress (GHQ-12: Goldberg & Williams, 1998), job satisfaction (Warr et al. 1979) and work-life conflict (Casper et al. 2007). Turnover intentions were measured with a single item. Matched data were obtained for 458 staff approximately 14 months later.

Job-related effort, over-commitment and all three indices of reward (promotion/salary, esteem and job security) were significantly related to strain outcomes in the expected direction. Considerable variation emerged in the main effects and two- and three-way interactions that predicted each outcome at Times 1 and 2, with the models accounting for between 15% and 62% of the variance.

Psychological distress was predicted by strong main effects of efforts, esteem rewards, and over-commitment and the three-way interaction between efforts, promotion/finance rewards and over-commitment. Work-life conflict was predicted by the main effects of effort, esteem rewards and a particularly strong contribution from over-commitment. A two-way interaction between effort and esteem reward and a three way interaction between efforts, job security and over-commitment also made a significant contribution to the variance in this outcome. Job satisfaction was predicted by the main effects of efforts and all three reward systems and a two-way interaction between effort and promotion/finance rewards. Finally, leaving intentions were predicted predominantly by all three reward systems (most notably esteem rewards) and the two-way interaction between efforts and promotion/finance rewards. The predictive ability of the ERI variables were generally stronger at Time 2, most notably for leaving intentions.

Esteem rewards appear to be particularly salient for academic employees as a key predictor of strain over time. Esteem, respect and fair treatment from managers and colleagues also appear to protect academics from the negative impact of job-related efforts on some aspects of wellbeing. The findings highlight potential interventions that could be developed to enhance wellbeing in academic employees.

Paper 2: Measuring Stressors and Strain in Academic Staff: Comparing the Fit of the Job-Demand-Control Support and Job Demand Resources Models.

Siobhan Wray

¹Sheffield Hallam University, Sheffield, UK, ²University of Bedfordshire, Bedfordshire, UK

This study compares the performance of two widely used models of job-related stress in predicting strain in UK academics. The job-demand control support (JDCS: Karasek, 1979; Johnson, Hall & Theorell, 1989) and the job demand-resources model (JDR: Demerouti et al., 2001) both attempt to account for the potential impact of job demands on employees. Both models have been tested extensively across a range of professional groups with varied results. This study aims to investigate whether the JDCS or the JDR model best fits the experience of academic staff working in UK Universities. The aim is to inform the development of interventions tailored to academic contexts.

A questionnaire was electronically distributed to all active members of the UK University and College Union (UCU) in 2012. 12,635 full-time academic staff (55% female) completed the survey. The HSE Management Standards Indicator Tool (Mackay et al., 2004) was utilised to assess job-related psychosocial hazards (i.e. demands, control, support from colleagues and managers, role, relationships and change). Perceived stress was measured using an index of three questions designed for the study.

Structural equation modelling was utilised. An alternative models approach was deployed to explore which of the two models best fit the data. Initial hierarchical multiple regression analysis suggests that the models explain a similar proportion of variance in perceived strain (i.e. JDC(S) = 57% and the HDR = 59%). Strong main effects were found in each model, most notably for demands and manager support in the JDC(S) and demands and relationships for the JDR. Two-way interaction effects were found in the JDR between demands and relationships, role and peer support. For the JDC(S), two-way interactions between demands and both peer and manager support were found but there were no three-way interaction effects.

The findings provide insight into the work-related psychosocial hazards that are the strongest predictors of perceived stress in a large, representative sample of UK academics. Supporting the finding that academic employees experience comparatively high levels of control (Kinman, Wray & Court, 2012), the findings suggest that interventions which aim to enhance control would not be fruitful. Due to its comprehensiveness, it is argued that the JDR model has more scope to inform interventions tailored to the working environment, particularly with regard to relationships and role.

Paper 3: Workaholism, Recovery and Detachment from Work Among Irish Academics.

Victoria Hogan, Michael Hogan, Margaret Hodgins
National University of Ireland, Galway, Ireland

This study utilised a daily diary perspective to examine the relationship between workaholism and post-work recovery and detachment from work in an academic setting. Data were collected from 44 university lecturers. Participants were classified as either workaholics (n= 15), enthusiastic workaholics (n= 13), or non-workaholics (n= 16). They each completed a pre-diary questionnaire and seven daily diaries over the course of a week.

Quantitative analysis of data revealed that both the workaholics and enthusiastic workaholics reported lower recovery and lower psychological detachment than the non-workaholics group throughout the week. Non-workaholics also reported lower levels of work-related cognitive intrusion than the two workaholic groups. Qualitative analysis revealed that the workaholics and enthusiastic workaholics reported more barriers to recovery than the non-workaholic group. However, in comparison with the non-workaholics and enthusiastic workaholics, the workaholic group were unique in their expression of worry and anxiety in relation to their work and their recovery ability.

These findings suggest that certain groups of workers may have greater difficulties detaching and recovering from work, which in the long term may lead to psychological and health problems. These findings are important for the design of interventions to promote recovery from work.

Paper 4: A multi-case Study of HR Interventions in Australian Universities: Critical Ingredients for Success.

Silvia Pignata, Tony Winefield, Carolyn Boyd, Chris Provis
University of South Australia, Australia, Australia

To enhance the understanding of work stress mechanisms and build upon research evaluating stress interventions, key human resource (HR) stress and well-being interventions,

implemented at five Australian universities, between 2000 and 2003 were investigated. The key purpose of the study was to investigate potential relationships between objective HR measures of intervention strategies at an organizational level, and employee-level psychological strain and work attitudinal outcomes, in order to identify what types of organizational intervention strategies were effective in changing employee-levels of psychological strain and attitudes of job satisfaction, affective organizational commitment, trust in senior management, and procedural justice in University contexts.

Cross-sectional data from 4,603 participants at two time points showed that levels of organizational commitment and/or trust in senior management were higher at four of these universities in 2003, and employee perceptions of procedural justice were higher at all the universities in 2003. Five senior HR Directors were surveyed to identify the measures taken to enhance employee well-being and morale. Results showed that senior management at all universities implemented strategies designed to: enhance training, career development and promotional opportunities for staff; improve remuneration and recognition practices; improve work-life balance for staff; and to enhance the fairness of organizational policies and procedures.

This study contributes to the improved management of people at work by identifying university-specific HR initiatives: (1) leadership development and management skills programs to enhance the capacity of leaders, particularly Heads of Departments, to manage employees; (2) a university wide strategy for the early intervention and management of stress claims in order to increase an awareness of the resources available to staff (and supervisors), and to assist in the early identification and reporting of stress and stress situations; and (3) a university wide restructuring of academic portfolios to streamline systems and administration processes within the university.

It is worthy of note that employees within the universities that implemented leadership development programs heightened their levels of perceived procedural justice, commitment to the organization, and trust in senior management. In addition, employees at the university that implemented a strategy for the early intervention and management of stress claims, reported the lowest level of psychological strain among the universities in 2003. This study contributes to the improved management of people at work by identifying university-specific HR initiatives that were targeted towards improving university workplaces.

Symposium title: Workplace Mistreatment: Examining Antecedents and Outcomes of Incivility and Aggression.

Arla Day

Saint Mary's University, Halifax, NS, Canada

Mistreatment at work is a widespread occurrence (Cortina, Magley, & Williams, 2001). The negative behaviours instigated towards a target vary in their intentions to harm, ranging from acts of incivility to more intense episodes of aggression and physical violence. Regardless of severity, all forms of mistreatment are in violation of the workplace's norm for respect and have undesirable consequences for employees' health, well-being, and job attitudes (Cortina, Magley, Williams, & Langhout, 2001; Tepper, 2000). Therefore, it is imperative to consider all forms of mistreatment in organizational research and practices. The current symposium presents a diverse selection of the latest workplace mistreatment research. This collection of papers examines the antecedents, outcomes, and important moderators of mistreatment using a variety of contemporary sampling methods and analyses.

This symposium will begin with two presentations that discuss a longitudinal daily diary study of workplace incivility with a sample of healthcare professionals. The first presentation will

examine the impact of incidents of incivility on job satisfaction and turnover intentions. The second presentation will investigate the relationships between affect, exhaustion, and incivility at the beginning and the end of work shifts. The last two presentations of the symposium examine how negative and positive experiences moderate the relationship between acts of mistreatment and their health outcomes. Specifically, the authors of the third presentation will discuss a study which examined how bus drivers' experience of violence combined with other negative factors can compound the unfortunate effects of poor mental health and fear of future violence. To end on an optimistic note, the last presentation will explore how positive and negative social interactions between long-term care staff and their residents can affect staff's mental health.

This symposium provides a rounded insight into workplace mistreatment by discussing potential antecedents (i.e. negative affectivity) as well as health and job-related outcomes (i.e. job satisfaction, turnover intentions, exhaustion, fear of future violence, and reduced reports of mental health). Furthermore, this symposium explains how there can be spill over effects of multiple types of workplace mistreatment and how positive interactions may be an important buffer on the effect of aggression on mental health. The practical implications of these findings for the workplace and for future research will be discussed.

Paper 1: Incidence and Correlates of Workplace Incivility at a Daily Level.

Vicki J. Magley¹, Jenna C. Shapiro¹, Michael P. Leiter³, Howard Tennen²

¹University of Connecticut, Storrs, CT, USA, ²University of Connecticut, School of Medicine, Farmington, CT, USA, ³Acadia University, Wolfville, NS, Canada

Research on workplace incivility has grown over the past ten years from documenting its frequency and general job attitude correlates (Cortina et al., 2001) to understanding fairly complex models associated with how targets appraise its severity (Bunk & Magley, 2013). Virtually all of this research has been based on targets' retrospective accounts of their experiences, linking those retrospective reports with current job attitudes and behaviours.

Given the increasing call to gather data that more closely links events (such as incivility), moods, and attitudes (Tennen, Affleck, Armeli, & Carney, 2000), this research employed a daily diary study to examine healthcare professionals' daily workplace experiences of incivility. Assessed at the end of their work shifts over a span of 14 days, participants reported how frequently they had experienced a range of possible, uncivil behaviours from *never* (0), *once or twice* (1), or *more than once or twice* (2). Additionally, prior to their assessment of incivility, they also provided responses to multi-item assessments of job satisfaction, turnover intentions, general work stress and negative affectivity. The purpose of the current project is to document the process of collecting such data (including possible pitfalls), the incidence of workplace incivility as measured on a daily level, and its daily correlates.

Past research has placed the incidence of incivility at or around 70% of any particular sample, when assessed retrospectively over a one- to two-year time period (Cortina, 2008). Of the 113 participants who responded to the incivility question in the daily survey, 53 (47%) experienced incivility at least once, 24 (45%) of whom experienced it more than once during the study period. Although these statistics might not seem terribly surprising (or, even, enlightening), the fact that incivility could even be assessed within a two-week time period is both noteworthy and disconcerting.

Past research has also documented cross-sectional associations between incivility and both job satisfaction and turnover intentions. Similar correlations with the diary data were examined and significant associations were found ($r = -.28$ and $.31$, respectively). Additionally, hierarchical regressions were conducted to examine these associations while also controlling for general work stress and negative affectivity. Incivility experiences contributed 2.3% (non-significant) and 3.9% ($p < .05$) of the variance in job satisfaction and turnover intentions

(respectively) beyond the control variables. When capturing average daily incivility frequencies (as opposed to the average across the entire study), incivility significantly accounted for variance in both job satisfaction (5.2%) and turnover intentions (4.4%) beyond the control variables.

Paper 2: Affect and Exhaustion Before and After Incivility: A Daily Diary Perspective.

Michael P. Leiter¹, Vicki J. Magley², Jenna C. Shapiro², Howard Tennen³

¹Acadia University, Wolfville, NS, Canada, ²University of Connecticut, Storrs, CT, USA,

³University of Connecticut, School of Medicine, Farmington, CT, USA

Increasing attention on workplace incivility has sparked interest in the processes through which incivility unfolds. This study explored whether employees' affect and energy levels at the beginning of their workday would relate to whether they encountered incivility during that workday. We also considered the relationship of experiencing incivility with affect and exhaustion at the end of the workday.

A daily diary study of 105 health care providers in a USA correctional system assessed daily levels of exhaustion, positive, and negative affect at the beginning and end of their shift for two consecutive weeks. At the within-individual level, there were 1,984 time points nested within 105 employees. Incivility was measured with a single item on which 41% of respondents reported some form of incivility.

Distinct patterns of relationships were evident in the analysis:

- End-of-shift exhaustion was more strongly related to the frequency of incivility ($r = .30$, $p < .01$) than was beginning-of-shift exhaustion ($r = .02$, n.s.): $t_{(497)} = -2.85$, $p < .01$.
- End-of-shift negative affect was related to the frequency of incivility ($r = .35$, $p < .01$) as was beginning-of-shift negative affect ($r = .31$, $p < .01$).
- End-of-shift negative affect was more strongly related to the frequency of an uncivil incident ($r = .35$, $p < .01$) than was end-of-shift positive affect ($r = .09$, n.s.): $t_{(497)} = -4.34$, $p < .01$.
- Beginning-of-shift negative affect was more strongly related to the frequency of an incivility incident ($r = .31$, $p < .01$) than was beginning-of-shift positive affect ($r = .05$, n.s.): $t_{(497)} = -4.20$, $p < .01$).

Overall, the findings show that one's level of negative affect both precedes and follows incivility. In contrast, exhaustion is more pronounced after an uncivil incident than it is prior to the event. Implications for improving workgroup environments are noted.

Paper 3: Aggression Experiences of Bus Drivers.

Shauna L. Smith, E. Kevin Kelloway

Saint Mary's University, Halifax, NS, Canada

Many forms of aggression have been distinguished within the literature (e.g. Neuman & Baron, 1996; Neuman & Baron, 1998). However, there is a lack of understanding about how various forms of aggression interact and whether they impact the outcomes under study. Given that all forms of violence and aggression fall under the umbrella term of aggression (Andersson & Pearson, 1999), it is generally agreed that they are closely related or have similar underlying characteristics.

In this study, it was hypothesised that there would be spill over such that one form of aggression would heighten sensitivity of another form of aggression. To test this relationship, this study examined combinations of various types of aggression (vicarious violence, road rage, and psychological aggression) and how they impact fear of future violence as well as psychological well-being.

Responses from 160 city bus drivers were obtained (40% response rate). For the purposes of this study, a road rage measure was developed along with an adapted measure of psychological aggression and violence (LeBlanc & Kelloway, 2002; Rogers & Kelloway, 1997; Schat & Kelloway, 2000). Using Baron and Kenney's (1986) technique, a moderated regression revealed that psychological aggression moderated the effect of experience of violence on fear of future violence. Similarly, road rage moderated the effect of experience of violence on fear of future violence. Road rage also moderated the effect of experience of violence on psychological well-being.

The results of this study show that violence has an enhanced effect on fear if one also experiences road rage or aggression. Additionally, violence has an enhanced effect on psychological wellbeing if one also experienced road rage. Often in a work environment that is characteristically aggressive, more than one type of aggression can be experienced. This study highlights how different types of aggression can interact to produce enhanced outcomes. Gaining a deeper understanding of how types of aggression interact can furthering understanding of the impact that multiple forms of aggression can have on the lives of employees.

Paper 4: Taking the Bad with the Good: Understanding Resident Aggression in Context.

Jennifer H.K. Wong¹, E. Kevin Kelloway¹, Margaret C. McKee⁴, Ann McInnis², Judith Godin³
¹*Saint Mary's University, Halifax, NS, Canada,* ²*Northwood, Halifax, NS, Canada,* ³*Mount Saint Vincent University, Halifax, NS, Canada,* ⁴*Saint Mary's University, Sobey School of Business, Halifax, NS, Canada*

A great deal of research attention has focused on issues of workplace aggression and workplace violence in recent years (Kelloway, Barling & Frone, 2006). Sufficient data have now been accumulated to dispel many of the myths surrounding workplace aggression. It is now clear, for example, that the vast majority of aggressive incidents are perpetrated by clients and members of the public rather than by co-workers (see for example, Barling, Dupre & Kelloway, 2011; Schat, Frone & Kelloway, 2006). This is certainly true in health care – an industry in which care providers are subject to extraordinarily high rates of workplace aggression, the vast majority of which are perpetrated by patients (e.g., Lanza, 2006).

In the current study we examine the experience of resident aggression by staff working in long-term care facilities (n = 820). Drawing on recent research in positive organizational scholarship (e.g., Kelloway, 2012; Gilbert & Kelloway, in press), we recognise that caregivers experience both negative and positive interactions with residents. We argue that examining experiences of aggression without considering positive interactions results in a truncated and misleading body of research findings. Accordingly, we hypothesised the following:

- Employee mental health will be negatively associated with the experience of resident aggression;
- Employee mental health will be positively associated with positive interactions with residents, and that;
- Positive interactions will moderate the experience of resident aggression such that the relationship between aggression and mental health will be weaker when employee also experience positive interactions with residents.

Mixed (i.e., multilevel) model regressions allowing random intercepts across long term care facilities, show support for all three hypotheses with plots of the interaction showing the anticipated effects. These data show the importance of considering interpersonal aggression (and by extension other stressors) in a broader context. In this case, failure to assess and incorporate more positive interactions with residents would result in a misleading picture of the effects of resident aggression. Our results show that resident aggression is not always necessarily associated with impaired mental health of care providers. The implications for future research and practice are discussed.

Symposium Title: Organizational Health Intervention Research: Current Empirical Developments.

Christine Ipsen¹, Gregor Jenny²

¹*Work Systems Design Group, Technical University of Denmark, Kgs. Lyngby, Denmark,*

²*Division Public and Organizational Health, ETH/University of Zürich, Zürich, Switzerland*

This symposium is one of three symposia submitted by the "International organizational health intervention research partnership". The aim of this symposium is to present new empirical developments based on participatory intervention models. All five studies developed and applied intervention models in various settings with the aim of initiating and implementing organizational level preventative changes. All studies put a strong focus on collective change: triggering discourse, collective reflection, mutual support, learning and changes in teams or networks of employees. The intervention process is designed to involve the most effective set of stakeholders (leaders, management, experts, co-workers) and connect them to an efficient network of change agents. At this symposium the researchers will present and discuss their perspectives and research results:

The authors of paper 1 applied and tested a participatory multi-level intervention model – POWRS, in four Danish SMEs. The project taps into the above mentioned issues and the findings suggest that the model enables SMEs to address problems and implement work-related changes by using in-house employee facilitators without the support of an external consultant.

The authors of paper 2 present initial findings from the PROCOME project that integrates process and outcome data on health interventions in order to compare the significance of various implementation components across program types and settings. The study has been conducted in Sweden and Denmark and focuses on the change process and implementation factors and highlights the impact on outcomes such as employees' health.

The authors of paper 3 focus on the measurement of psychosocial factors to trigger discourse and change, for which they developed the "Organizational Health Index". Their study, conducted in Switzerland, shows that the index predicts health and productivity outcomes, and how it can figure as a success indicator of health-oriented organizational change.

The authors of paper 4 present a summative evaluation of a tailor-made training program focusing on health-promoting leader-follower interaction in German companies. The findings show that leaders have become more authentic and that the team-climate is perceived to be more participative.

Finally, the authors of paper 5 present another comprehensive project which focuses on low qualified workers. The research team evaluated the intervention program ReSiDu in Germany and the results showed that the health of low qualified workers improved due to the intervention, and that the program activated natural helpers and enhanced supervisor support. Throughout this symposium the aim is to demonstrate that the understanding of participatory and multi-level interventions has come a long way, with substantial results using various tools and models.

Paper 1: Work related Changes and New Understandings of Prevention: Results of Multi-Level Participatory Interventions in Four SMEs.

Christine Ipsen, Signe Poulsen, Liv Gish

Work Systems Design Group, Technical University of Denmark, Kgs. Lyngby, Denmark

This paper presents the result of four SMEs' use of a multi-level participatory self-help intervention model (the PoWRS model – Prevention of Work Related Stress). The model itself supports a new view on the prevention of work-related stress in the participating companies, besides the concrete development of organizational level changes. By employing the model the companies became capable of developing new work practices in a multi-level participatory process using local in-house resources as facilitators.

The PoWRS model was developed as part of the research project: “Productivity and Well-being”. The aim of this project was to develop and test a multi-level participatory intervention model that could be applied by SMEs that are often characterised by their lack of resources (such as not having access to HR-resources to facilitate change processes). The PoWRS model targets the work (primary interventions) rather than the employees and builds on work processes and how they are perceived by the employees.

The implementation of the organizational-level changes is a multi-level participatory process with the aim to develop new preventive practices. The activities included: a FishBone Workshop to explicate tacit knowledge about what creates enthusiasm and stress at the work place; Multi-voting, which decided which two work-related changes were to be initiated; a KickOff session to mark the start-up of the actual changes; continuous interviews of colleagues by the in-house facilitators; and, ongoing status meeting among both managers and employees to evaluate the process. Examples of work-related changes included; improved project management, recognition and feedback, well-defined tasks, and improved management.

The research data (i.e. surveys, interviews and Chronicle Workshop) and the derived results show the PoWRS model provides a collective learning process about the work place which supports new insights among both managers and employees. Feedback shows that having collective reflections about work, issues and potential solutions and changes is an eye-opener to how change processes can be addressed and how prevention of work-related stress can be understood. In addition to supporting a new understanding of prevention, the use of the model also results in concrete changes that become solutions to the workplace’s current and specific problems. The use of the PoWRS model thus enables an SME to address their own problems and implement the changes without needing the support of an external consultant.

Paper 2: Linking Process to Employee Outcomes, an Empirical Cross National Study.

Susanne Tafvelin^{1,2}, Ulrica von Thiele Schwarz¹, Henna Hasson¹

¹Karolinska Institutet, Stockholm, Sweden, ²Umeå University, Umeå, Sweden

Background: The methods through which occupational health interventions are implemented influences the outcomes of the interventions, e.g. employees’ health. However, there is a lack of studies investigating the effects of implementation across different occupational interventions, organizational contexts, and countries. The PROCOME project is a Nordic collaboration project that aims to integrate process and outcome data on health interventions in order to compare the significance of various implementation components for intervention effects across program types and settings. The aim of the study is to present the first empirical findings from this project.

Methods: Data from two intervention studies from Denmark and Sweden was used. The common feature of the two interventions is that they are based on the most recent theories of occupational health. The interventions target leaders’ and employees and evaluate the outcomes on employees’ work situation, health wellbeing and sickness absence. Process data in terms of implementation factors, individual factors, and contextual factors are used to investigate its potential effect on the intervention outcomes.

Expected Results: Regression models were utilised to analyse and compare the influence of the intervention process on employee outcomes within the two datasets. Instead of only conducting descriptive studies of factors that support or hinder intervention implementation, the present study highlights the impact of these factors on program effects such as employees’ health.

Implications: Effective intervention requires effective methods for implementation. This study is one of the first to compare factors related to implementation (process) in relation to the

intervention outcomes across occupational health interventions in two Nordic countries. The study will contribute to the theoretical development of occupational health research by empirically testing, and thereby revising, a conceptual framework linking processes to change outcomes. The results of this study may guide organizations' selection of interventions so that they choose interventions that are likely to succeed given the specific attributes of the organization and its context. Also, it can show how employers' can adapt their implementation strategy in order to optimise the effect of a program. Finally, this study will highlight the importance of implementation for interventions success, which will motivate organizations to take implementation issues into consideration.

Paper 3: The “Organizational Health Index” - Development and Application in Research and Practice.

Gregor Jenny, Rebecca Brauchli, Désirée Füllemann, Georg Bauer

Division Public and Organizational Health, ETH/University of Zürich, Zürich, Switzerland

Background: There is a lot of evidence on the impact of psychosocial factors at work in regard to health outcomes. Due to the constant change of organizations and their environment, these factors are subjected to change and need to be monitored regularly. This presentation explores the development and application of a single index measuring the health-promoting quality of organizations on the basis of psychosocial factors at work. It aims to enable organizations to identify the need for health-oriented interventions and to evaluate their efforts on a regular basis.

Methods: Organizations are used to key performance indicators, and in regard to health promotion they mostly evaluate days of sick leave and accidents. A ratio of job resources and demands were developed as a key indicator of the health-promoting quality of an organization which was labeled the “Organizational Health Index”. This index was developed and validated using samples of two occupational health intervention studies (eight companies, n= 3,500; and two companies, n= 400), using a set of job resources and demands that were computed into a single index and analysed in regard to a variety of health and performance outcomes.

Results: The “Organizational Health Index” was found to significantly predict sick leave, stress symptoms, work engagement and self-rated productivity, using same and different sources of data and external benchmarks. The index was also utilised to analyse longitudinal changes in regard to the occupational health intervention, revealing significant changes depending on the effectiveness ratings of participants.

Discussion: This index meets the criteria of both scientific validity and practical utility. With regards to the latter, the index can serve as a broadly and regularly assessable key indicator of psychosocial factors at work and thus the health-promoting quality of an organization. Further, it can be communicated in the language of management and represents a success indicator of health-oriented change processes in organizations.

Paper 4: Training Health Related Leader-Follower Interaction: Results of Summative Evaluations.

Torsten Holstad¹, Thomas Rigotti², Kathleen Otto³, Christiane Stempel¹, Gisela Mohr¹

¹University of Leipzig, Leipzig, Germany, ²University of Mainz, Mainz, Germany, ³University of Marburg, Marburg, Germany

Purpose: There is growing evidence that leaders play a crucial role for employees' wellbeing. We report on a field study that aimed at furthering health-promoting leadership. The program was tailor-made for each participating team and included workshops for teams, lectures, and observations of team meetings. Additionally, separate workshops and coaching for leaders was provided, and leaders also had the opportunity to write a leadership diary. In a participative process, all teams developed goals that were pursued over a period of approximately 14 months. This intervention is distinct to other leadership training programs, as all members of the team participated in the process.

Design/Methodology: The intervention was carried out with 11 teams (107 employees) in Germany. A matched sample served as control group for summative evaluation of the training program. Data were collected by questionnaires that were completed prior to the training and after completion of the last module. The questionnaires included ratings of work stressors, leaders' behavior (ratings by employees) and employees' wellbeing and job attitudes.

Results: After training we found the intervention group more likely to evaluate their leaders as more authentic in terms of higher self-awareness, display balanced processing, and greater transparency than the matched control groups. Moreover, team-climate was regarded as more participative. Employees in the intervention group also indicated higher levels of vigor and self-efficacy than before the training, while no such difference was found for the control group. However, a significant effect on emotional exhaustion was not confirmed.

Limitations: Private business is underrepresented in the present sample and the number of participating teams is rather low due to the complex intervention.

Research/Practical Implications: The results of this study support the idea that health-promoting leadership can be trained. Moreover, the effects on positive indicators of employees' wellbeing were found. Unfortunately, the effects on measures of employees' strain could not be confirmed. Thus, positive leadership seems to have the potential to increase employees' wellbeing while effects on negative indicators of wellbeing seem to be limited.

Originality/Value: The quasi-experimental longitudinal design employed allows for causal inferences.

Paper 5: The Evaluation of a Multiplier Health Intervention Program for Low SES Workers.

Christine Busch, Julia Clasen, Eva Winkler, Julia Vowinkel
Organizational Psychology, University of Hamburg, Hamburg, Germany

Health promoting interventions for working people of low socio-economic status (SES) are hard to find; even though these individuals have higher risks of mortality and morbidity than individuals with higher SES. We present results of the evaluation of an organizational-level health intervention program for low SES workers in Germany. The intervention program is called Resource and Stress management for culturally Diverse low-skilled workgroups (ReSuDi).

As the success of organizational health interventions depends heavily on the context in which the intervention is conducted, and the reach of the target group, ReSuDi was developed in close co-operation with prevention providers, such as health insurance companies, which are the main providers for worksite health promotion in Germany. They have access to companies offering low-skilled jobs and they may convince managerial decision-makers to participate.

ReSuDi is a multiplier intervention with multipliers on different hierarchical levels of the organization: Low-level supervisors and middle management are trained in health-promoting leadership behavior, because they influence workers' behavior and health in particular. In addition, the success of an intervention depends heavily on the attitude and behavior of low-level supervisors and middle management. Further, we used the concept of natural helping, which has been used for a variety of health issues and populations, many of which have focused on low SES individuals and ethnic-minority populations, but rarely in the workplace. Culturally diverse, natural helpers, of low-skilled workgroups were trained to improve social support at work. An organizational network of natural helpers was also established.

The commitment of top management is at the heart of a successful approach to an organizational-level stress-prevention program. Therefore, ReSuDi offers a workshop for the company management and health promotion actors in which the participants work on how they can show their commitment to the intervention program. The intervention research strategy

combines process and outcome evaluation with a waiting control group design and pre-, post-, intervention assessments in three companies within different sectors (n = 644). Analysis was conducted using latent true change modeling in Mplus (version 6.12) and Maximum Likelihood parameter estimation. Support was found for the hypotheses that the health of low SES workers in the intervention group improved after the intervention took place in the first research phase. Support was also found for the hypothesis that the intervention program enhanced supervisor support. The details of the program have been published in a program manual to spread ReSuDi nationwide so that it can be used by prevention providers and managerial decision makers.

Symposium Title: Police Stress in the 21st Century: Causes, Consequences, and Interventions.

Jonathan Houdmont

University of Nottingham, Nottingham, UK

Recent times have seen a resurgence in police stress research. In the UK in particular this has largely been a response to substantial financial cuts to policing budgets that has resulted in a fall in officer numbers and resource availability alongside increased job demands for those who remain in the role. This symposium contains five thematically linked presentations that together consider the causes and consequences of police stress as well as organizational-level interventions to promote officers' health.

In the first presentation Gail Kinman and Jonathan Houdmont explore the status of job demands and resource availability and the implications of this for officers' work-home conflict. The study draws upon data gathered in 2012 from approximately 2,000 officers of an English territorial police force.

In the second presentation Jonathan Houdmont and Raymond Randall consider the nature of psychosocial working conditions that are associated with burnout and psychological distress. The study uses survey data contributed by 930 police custody officers from 37 forces across England and Wales in 2013. The job performance of police officers has public safety and security implications. It is therefore important to identify aspects of work design, management, and organization (psychosocial hazards) that might contribute to performance behaviours. Knowledge in this regard could usefully inform the design of organization-level interventions to promote performance.

In response, the third presentation (Houdmont & Randall) examines longitudinal relations between psychosocial hazard exposures and the job performance of police custody officers. This presentation draws on the findings of the aforementioned 2013 survey of custody officers plus a follow-up survey undertaken in the first quarter of 2014.

Having explored the causes and implications of police stress, the final two presentations move on to consider police-specific interventions to reduce stress. Two studies from Australia are to be presented. First, Amanda Allisey and colleagues will present their work that has explored the extent to which psychological health is a concern within Australian policing organizations and how psychological health is currently being addressed within this policing context. The study further aimed to develop an understanding of how best-practice guidelines for the prevention and promotion of mental health in the workplace might be applied in the policing context.

Finally, Kathryn Page and colleagues will describe the design and implementation of a stress prevention strategy that involves organizational-level (leadership coaching) and individual-level (workload management) strategies. The authors contend that the combination of these interventions, implemented at a station level, will increase supervisor support and job control and reduce work demands (primary outcomes) and in turn, reduce stress and increase employee satisfaction and engagement (secondary outcomes).

Paper 1: Using the Job Demands-Resources Model to Predict Work-Life Conflict among UK Police Officers.

Gail Kinman¹, Jonathan Houdmont²

¹University of Bedfordshire, Bedfordshire, UK, ²University of Nottingham, Nottingham, UK

Police officers have been found to experience high levels of operational and organizational stressors and are at considerable risk of burnout and PTSD (Waters & Ussey, 2007; Summerlin et al., 2010). Although police officers experience the type of work demands that have long been associated with work-conflict in other occupational groups (such as long working hours, emotional demands and high job involvement (Burke, 1993; Johnson et al. 2005), little is known about the factors that predict work-life conflict in this profession.

This study utilised the job demands-resources model (Bakker & Demerouti, 2007) to predict work-life conflict in a sample of UK police officers. Three manifestations of conflict are considered: time-based, strain-based and behaviour-based (Greenhaus & Beutell, 1985). Behaviour-based work-life conflict has been under-researched, as it is typically considered irrelevant to most occupations (Kinman & Jones, 2001). It has been argued, however, that it may be more salient in jobs characterised by greater interdependence and interpersonal contact such as policing (Dierdorff & Ellington, 2008). Relationships between the three conflict dimensions and emotional exhaustion were also examined.

Police officers (n = 2,025; 63% male) completed the 35-item Management Standards Indicator Tool (HSE) which measures perceived exposure to work-related demands, control, support from colleagues and managers, relationships and role, and change management. Job control, support, relationships, role and change were categorised as resources as they could be considered functional in achieving work goals and could potentially reduce the negative impact of job demands (Bakker & Demerouti, 2007). A three dimensional measure of work-life conflict was utilised to measure time-based (TBC) strain-based (SBC) and behaviour-based conflict (BBC) (Carlson et al., 2000). Emotional exhaustion was assessed by the Maslach Burnout Inventory (Maslach et al. 2001).

Levels of BBC were higher and relationships between BBC and emotional exhaustion were stronger than the other manifestations of conflict. The JDR model predicted 25% of the variance in TBC, 33% in SBC and 20% in BBC. Strong main effects were found for control, role and relationships with some evidence of two-way interactions. Little evidence was found that support from colleagues or managers protected police officers from any aspect of work-life conflict.

The findings highlight the salience of behaviour-based work-life conflict in the police. Interventions that aim to enhance role clarity and the quality of interpersonal relationships are likely to reduce work-life conflict and enhance wellbeing in the sector.

Paper 2: Which Work Characteristics Predict Employee Outcomes For Police Custody Officers? An Examination of Generic and Occupation-Specific Characteristics.

Jonathan Houdmont¹, Raymond Randall²

¹University of Nottingham, Nottingham, UK, ²Loughborough University, Loughborough, UK

Background: Police stress research has largely neglected to account for role-related variance in the types of psychosocial hazards to which officers are exposed. This has limited the amount of information available to those wishing to implement targeted stress reduction interventions. The job of police custody officer is very different from that carried out by many police officers. Therefore, it may be that generic psychosocial work environment measures cannot adequately explain variance in work-related psychological health outcomes reported by custody officers.

Aim: This study aimed to assess the extent to which the augmentation of a generic measure of psychosocial hazard exposure with a custody-specific measure of the same helps to explain incremental variance in psychological health outcomes.

Method: 930 police custody officers drawn from 37 forces across England and Wales completed an online questionnaire in January 2013. Generic psychosocial working conditions (job demands, job control, managerial support, peer support, relationships, role, and change) were measured using the UK Health and Safety Executive's Management Standards Indicator Tool (MSIT). These seven dimensions of the psychosocial work environment can, if not properly managed, place employees at risk of harm. Custody-specific psychosocial working conditions were measured using 26-items developed in a qualitative pilot study involving custody officers drawn from a large English police force. Health indices included burnout (emotional exhaustion scale from the Maslach Burnout Inventory) and psychological distress (GHQ-12).

Results: Custody-specific psychosocial hazards explained a significant amount of variance in emotional exhaustion (7%) in addition to that explained by items in the generic measure (34%). Interestingly, custody-specific psychosocial hazards explained only an additional 0.7% of the variance in GHQ-12 scores over and above the 24.7% accounted for by the MSIT.

Conclusion: These findings highlight an imperative for the development of role-specific psychosocial work environment measures for use alongside generic measures in police stress research. The use of context-specific measures may facilitate the design of similarly specific interventions concerned with the promotion of officers' health.

Paper 3: Longitudinal Relations between Psychosocial Hazard Exposure and Performance Behaviour in Police Officers.

Jonathan Houdmont¹, Raymond Randall²

¹*University of Nottingham, Nottingham, UK,* ²*Loughborough University, Loughborough, UK*

Background: The job performance of police officers has public safety and security implications. It has been established that police officers can also experience significant problems with the design, management, and organization of their work (psychosocial hazards). Relatively little is known about the links between these problems and work performance. Research on this issue has been confined to cross-sectional studies conducted in the Australian context. These studies have provided information on the co-occurrence of psychosocial hazard exposures and performance behaviours but the links between exposure to hazards and subsequent work performance remain unclear. The extent to which the extant evidence base can be generalised beyond the Australian policing context is also unclear. Longitudinal analysis of hazard-performance linkages could usefully inform the design of organization-level interventions to promote performance.

Aims: The extent to which psychosocial working conditions predicted three facets of officers' performance behaviours (in-role behaviour, organizational citizenship behaviour towards the individual and organizational citizenship behaviour towards the organization in general) were examined.

Method: Two full panel longitudinal studies with a 12-month temporal lag were conducted. Study 1 involved police officers drawn from a territorial police force in England (n =2,026 at Time 1; Time 2 data will be available at the end of 2013). Study 2 involved police custody officers drawn from 37 forces across England and Wales (n = 930 at Time 1 and the second wave of data collection will take place in January 2014). Psychosocial hazard exposure was measured using the HSE Management Standards Indicator Tool that assesses seven dimensions of the psychosocial work environment that if not properly managed can lead to

harm (demands, control, managerial support, peer support, relationships, role, change). Self-report versions of the scales developed by Williams and Anderson (1991) were used to measure performance behaviours.

Results: Cross-sectional analyses indicated that in both studies psychosocial hazard exposure was negatively associated with all three facets of performance behaviour and that these relationships remained after controlling for the influence of demographic variables. The results of longitudinal analyses will be reported showing the extent to which psychosocial working conditions are linked to subsequent performance behaviours.

Conclusions: Initial cross-sectional findings indicate that reported problems with the psychosocial work environment may be a contributory factor to job performance. The validity of these findings will be tested in longitudinal analyses. The findings indicate that organizational-level interventions designed to improve the psychosocial work environment could help to enhance job performance in police organizations.

Paper 4: Understanding Workplace Health In Context: An Application Of Mental Health Prevention Guidelines To The Policing Industry.

Amanda Allisey¹, Kathryn Page², Angela Martin³, Irena Tchernitskaia², Nicola Reavley², Anthony LaMontagne², Andrew Noblet¹

¹*Deakin University, Burwood, Australia,* ²*University of Melbourne, Melbourne, Australia,*

³*University of Tasmania, Hobart, Australia*

The workplace represents a significant opportunity to promote positive health and prevent illness. Despite our understanding of the influence that workplaces can have on overall employee functioning, the role of the workplace in preventing mental illness remains a relatively under-researched area. Policing is generally considered a highly stressful occupation, and operational officers are thought to be at a high risk of developing mental health problems as a result of exposure to stress (Gershon et al., 2009; Wang et al., 2010). The vast majority of previous research also indicates that organizational stressors (e.g., workplace relationships, job demands, and unfair procedures) are consistently rated as more noxious than operational stressors (e.g., attending crime scenes, dealing with violent offenders) (Kop, Euwema, & Schaufeli, 1999; Brough 2004).

Best-practice guidelines based on expert consensus indicate that the prevention of mental illness in the workplace is best conducted at the organizational level (Workplace prevention of mental health problems: Guidelines for organizations, 2013). Specifically, an ideal mental health prevention strategy would develop a positive work environment that supports and encourages mental health through the reduction of key job stressors (e.g., balancing job demands with job control, creating fair workplaces) and the provision of essential resources (e.g., training and development opportunities, mental health education, supportive leadership practices). Most importantly, health and wellbeing interventions should be tailored and based on the specific needs of the target group or industry (LaMontagne, Keegel & Vallance, 2007).

Utilising in-depth focus groups and interviews with both operational and non-operational staff, the current study aimed to explore the extent to which mental illness was a concern for an Australian state-based police organization and how mental health was currently being addressed within this policing context. Further, we aimed to develop an understanding of how best-practice guidelines for the prevention and promotion of mental health in the workplace (Workplace prevention of mental health problems: Guidelines for organizations, 2013) might be applied to the police organization. The results will be presented with a specific emphasis on how job stress and mental health prevention activities can be contextualised to the policing sector providing examples of both workplace policies and practices.

Paper 5: Creating Healthy Workplaces: Coaching Leaders to Prevent Stress in an Australian Policing Organization.

Kathryn Page¹, Amanda Allisey², Andrew Noblet², Anthony LaMontagne¹

¹University of Melbourne, Melbourne, Australia, ²Deakin University, Burwood, Australia

Job stress related mental health problems represent a growing concern in the workplace, with impacts on workers, organizations and workplace health authorities. Systematic reviews show that the most effective job stress interventions combine primary prevention to reduce job stressors with secondary intervention used to strengthen workers' abilities to cope with stressors (LaMontagne, Keegel, Louie, Ostry, & Landsbergis, 2007).

Supervisor support plays a key role in preventing stress by buffering the impact of psychosocial stressors on employee outcomes. As such, developing supportive leaders is a key organizational strategy for modifying the psychosocial working environment and in turn reducing employee stress and increasing wellbeing (Kelloway & Barling, 2010).

This paper will describe the design and implementation stages of an integrated approach to stress prevention in a policing context. The intervention involves both organizational (leadership coaching) and individual level strategies (workload management). Specifically, it is proposed that the combination of these interventions, implemented at a station level, will increase supervisor support and job control and reduce work demands (primary outcomes) and in turn, reduce stress and increase employee satisfaction and engagement (secondary outcomes).

Two police stations will participate in the intervention and two as (non-randomised) controls. All four stations will complete pre- and post-intervention surveys measuring key factors previously found to cause stress in this context (high demand, low control and low supervisor support) as well as individual level outcomes (mental health, work engagement, job satisfaction). The intervention will involve sergeants in 360 degree leadership assessment and small group coaching (4 sessions, 3-4 sergeants per group). Workload management skills of operational officers will be developed through training. The intervention will take place Sept-Dec 2013 and the results of process and outcome effectiveness will be available in early 2014.

The information presented will be useful for researchers and practitioners interested in designing and implementing systems approaches to stress prevention using collaborative and participative methods. Given that workplace demands are often difficult to change, or outside a workplace's control (i.e., due to social or economic factors), supervisor support may be a more realistic and modifiable target for occupational health psychology interventions.

Symposium Title: Contextualising the Job Demands-Resources Model.

Karina Van De Voorde, Marc Van Veldhoven

Tilburg University, Tilburg, The Netherlands

The job demands-resources model (Demerouti, Bakker, Nachreiner & Schaufeli, 2001) is one of the most widely used frameworks for explaining the relationships between job factors, employee health and job performance. In the JDR-model, job demands and resources are the starting point. In particular, the JDR-model and related research have emphasised how employees' experiences of resources and demands activate motivational and energy depletion processes which influence their health and job performance. However, work takes place in the context of a wider environment that incorporates organizations and institutions, as well as a series of actors within these. Up until now the role of the wider context in the JDR-model has largely been ignored.

Although the organizational and institutional context is expected to be important for shaping individual employees' health and performance, few studies look at how the wider context of work is related to the health and performance of employees. Consequently, we lack an understanding about how, why, and to what extent contextual factors influence job demands and resources.

In addition, although the health and job performance of employees are expected to be important conditions to be met to achieve business performance, research on how employee health and job performance are actually linked to business performance is scarce. As a result, our understanding of how individual health and job performance in turn affect business performance is also limited.

Drawing from the JDR model, this symposium aims to explore how the wider context can be incorporated into micro-level theories on employee health and job performance. To this end, this symposium aims to:

- Stimulate knowledge on how and why contextual factors affect demands and resources;
- Increase our understanding of how business performance can be predicted by the two mechanisms theorized in the JDR model;
- Present research designs and methodologies that can be applied to contextualise the JDR model.

Paper 1: Job Demands, Job Control, and Employee Outcomes: The Moderating Effect Of the Psychological Climate.

Stephen Wood¹, George Michaelides², Maria Karanika-Murray³

¹University of Leicester, Leicester, UK, ²Birkbeck University of London, London, UK,

³Nottingham Trent University, Nottingham, UK

It is widely argued that research on job design in general and the demands-resources and Karasek's specific theories of its effects have underplayed the workplace context. This paper pursues one area of concern: how the context may moderate the impact of job design on employee outcomes.

Contextual factors may strengthen positive relationships between resources and outcomes or reduce a negative relationship between demands and outcomes. Alternatively they may reduce a positive resources-outcome relationship or heighten a negative relationship between demands and outcomes. For example, the job satisfaction of a person with low control may be even lower if the perceived climate is one that favours high levels of control as the person perceives this as unfair; or, high demands may be even more dissatisfying when the psychological climate is perceived unfavourably.

We test these competing hypotheses by concentrating on the moderating effect of the psychological climate, a key contextual variable, on job satisfaction and intrinsic motivation. We focus on the domain-specific climate for job design, and use the recently developed measure of this based on self-determination theory, which has three dimensions reflecting the three core elements of that theory: the climate for autonomy, competence and relatedness.

The data is from a sample of 2,110 health workers from 143 workplaces (in 17 UK organizations). We examined direct and interaction effects using age, gender, managerial responsibility, job tenure, and sector (public/private) as control variables.

The results showed both job demands and control (our measure of resources) and the three psychological climate measures (autonomy, competence, relatedness) are independently related to job satisfaction and intrinsic motivation.

No interaction between demands and control was observed. The analysis of interaction effects on both employee outcomes reveals some support for the hypothesis that the effects of demands and resources are negatively affected by the climate. Significant interactions between relatedness climate and demands were negative for both job satisfaction and intrinsic motivation suggesting that the negative effect of demands is positive at low levels of relatedness climate. The rest of the significant interactions were positive. For example the interaction between demands and competence climate reveals a relationship that is negative under a climate of low competence support, but is positive at high levels of competence support.

Paper 2: Strategic Human Resource Management and the Job Demands-Resources Model.

Marc Van Veldhoven¹, Karina Van De Voorde¹, Monique Veld^{1,2}

¹*Tilburg University, Tilburg University, The Netherlands,* ²*Open University, Heerlen, The Netherlands*

Strategic Human Resource Management (SHRM) concerns managerial policies, procedures and actions that aim at achieving organizational goals through people (Boxall & Purcell, 2011). SHRM literature emphasises that not only do the right people need to be included or induced as employees, but employees also need to perform the work behaviours that are necessary for the organization. It is here that the JDR Model (Bakker & Demerouti, 2007) comes in. SHRM shapes job demands and job resources along with impacting employee strain and motivation in the process of managing work behavior that fits organizational goals (van Veldhoven, 2012; van de Voorde & Boxall, in press). Seen from an individual psychological perspective SHRM constitutes an important context factor for work as well as work performance.

An empirical study was performed in a regional hospital in the Netherlands in order to investigate the linkages between HRM, work and performance (April-June 2013). Line managers of 45 departments were interviewed as to current HRM (last month; across a range of functional HRM areas) and performance (last month; productivity and quality in comparison with similar departments in other regional hospitals). Employees in these departments responded to a survey on job demands, job resources, work strain and work motivation in April (T1) and in June (T2) (N = 311 at T1; N = 269 at T2).

Preliminary analyses showed at T1, HRM and performance variables at the departmental level were indeed related to individual level demands-resources as well as strain-motivation. Some specificity in the linkages also would appear to be present. Multilevel SEM analyses are currently being performed to better map the linkages under investigation and the full results will be presented at the conference.

Paper 3: Utilising the JDR Model to Develop Tailored Questionnaires to Measure Working Conditions.

Johan Simonsen Abildgaard¹, Karina Nielsen², Kevin Daniels²

¹*University of Copenhagen, Copenhagen, Denmark,* ²*Norwich Business School, Norwich, UK*

The current study presents how an organizational level intervention in two postal areas of the Danish postal service (Nielsen et al., 2013) used a novel Job Demands Resources (JDR) based method to develop a tailored questionnaire for identifying work environment issues. The study compares the company's previously used standardised procedures to the tailored JDR based alternative. The tailored questionnaire in question is developed on JDR theory (Demerouti et al., 2001) and specifically measures aspects of working conditions that are perceived as positive and negative. To assess the usefulness of the questionnaire, this paper draws on concepts of shared mental model (Daniels et al., 1995; Weick, 1989) and sense making (Weick, 1995) to analyse the employees and managers mental models of the two different questionnaire approaches.

The JDR based method for developing the tailored questionnaire is a process of conducting a series of cognitive mapping interviews (McDonald et al., 2004) to reveal the aspects of work participant's views as important. These aspects of work were translated into questionnaire items that were tailored to the specific population in terms of context and the nature of the job. The study uses interviews from a representative sample of employees to evaluate the reception of the tailored questionnaire. Finally, the contents of the initiatives developed on the basis of the conventional, standardised questionnaire and the tailored questionnaire were analysed.

This study shows that the tailored questionnaire is perceived by employees to be substantially closer to measuring positives and negatives of specific work processes. The tailored questionnaire sheds light on the distribution of attitudes towards specific aspects of work, not only how many were discontent but also how many were neutral and positive. This led to a more detailed picture of the perceived work environment. Employees perceived the tailored questionnaire process to be more inclusive and empowering than the standardised questionnaire. The tailored measures reported on specific aspects of work and hence action plans were developed to address specific problems of perceived relevance. Likewise the degree of detail in the tailored questionnaire caused the developed initiatives to be more nuanced, substantial and concrete than previous action plans.

This study suggests that developing a local tailored survey tool based on the JDR model has substantial benefits. Those conducting intervention research projects as well as practitioners should consider measuring both positive and negative aspects of work, and likewise consider the benefits of tailoring questionnaires to fit the local context.

Paper 4: The Job Demands-Resources Model: A Simple Representation Of The Complex Reality?

Evangelia Demerouti¹, Arnold B. Bakker^{2,3}

¹*Eindhoven University of Technology, Eindhoven, The Netherlands,* ²*Erasmus University Rotterdam, Rotterdam, The Netherlands,* ³*Lingnan University, Hong Kong, Hong Kong*

The Job Demands-Resources (JD-R) model was developed to explain the development of the two components of the burnout syndrome i.e. exhaustion and distancing from work. Since its introduction the model has proved to be able to explain employee health and motivation.

Job demands represent aspects of the work that require effort and therefore are associated with specific physical and psychological costs. Therefore, job demands are generally considered as the initiators of the health impairment process. In contrast, job resources are aspects of the work environment that help to fulfil job demands or reduce the associated costs and stimulate learning. Job resources are the most important predictors of work engagement, and are the initiators of a motivational process. The JD-R model has been expanded with additional elements to examine how job demands and (job and personal) resources have unique and multiplicative effects on job stress and motivation, and to focus on reversed effects of health and motivation on job demands and job resources.

The main goal of this presentation is to clarify how to use the JD-R model to explain health, motivation and consequently job performance in various occupational contexts. The first step is to uncover the job demands and job resources that are relevant for the specific occupational or organizational context. Typically this occurs by means of interviews with various job holders. The information collected through the interviews is then translated into specific demands and resources that can be measured through a questionnaire instrument or an observation checklist. Examples of applications of the JD-R model will be discussed during the presentation, like for instance, the contextualisation of JD-R model within lean manufacturing. The presentation will end with specific suggestions and unresolved issues regarding the JD-R model.

Symposium Title: The Dark Side Of Leadership: Exploring the Negative Impact on Employee Well-Being.

Karina Nielsen

University of East Anglia, Norwich, UK

Although, this research has received increased attention, it still faces several challenges. Firstly, most of this research has been cross-sectional in nature, thus making it difficult to conclude on the long-term effects of leadership. In addition, a few studies have found that the links found in cross-sectional research could not be established over time (Tafvelin et al., 2011, Nielsen et al., 2008; Nielsen & Munir, 2009).

Another challenge is the lack of conceptualisation of constructs. There has been a one-sided focus on either the negative effects of poor (abusive or destructive leadership) or the positive sides of styles such as transformational leadership without examining how these types of leadership are related and interact. An additional challenge of transformational leadership is that the concept has been uncritically transferred from the performance arena. As transformational leaders encourage their followers to perform “above and beyond the call of duty” (Bass, 1990), employees may as a result become overloaded and this may, in the long-term, result in poor health and well-being. In this symposium we present five studies on the ‘dark’ side of leadership:

In the first study, the mediating effects of physical and mental health on the relationship between abusive supervision and loyalty are examined. In the second paper, transformational leadership is found to predict fewer attempts to craft a challenging job and higher levels of burnout over time.

In the third paper, a complex relationship is revealed in which transformational leadership is inversely related to sickness absenteeism but employees who come to work while ill and who work in groups with a transformational leadership have higher levels of sickness absence.

In the fourth study, both constructive and destructive forms of leadership (laissez-faire and tyrannical) are examined in terms of their relationship with positive and negative outcomes. In the fifth presentation, how inconsistent leadership (being high on both laissez faire leadership and transformational leadership) substantially reduces any positive effects of transformational leadership on safety compliance, safety initiative and mental health is explored.

Paper 1: Why Does Abusive Supervision Undermine Loyalty And Efficacy? A Decrease in Health as an Explanation.

Kathleen Otto¹, Torsten J. Holstad², Christiane Stempel², Thomas Rigotti³

¹*Philipps University of Marburg, Marburg, Germany,* ²*University of Leipzig, Leipzig, Germany,*

³*Johannes Gutenberg University of Mainz, Mainz, Germany*

Leadership behavior has been found to be a main precursor to harassment in the workplace. According to Tepper (2000) abusive supervision can be defined as public intimidation or humiliation of followers including acts of non-verbal aggression by supervisors. Whereas several studies have demonstrated the devastating impact of abusive supervision on followers’ wellbeing and their organizational attitudes (for example, commitment) research thus far has failed to provide a clear picture of the underlying psychological mechanisms explaining the particular negative role of abusive supervision on various outcomes.

The present study aimed to shed light on the link between abusive supervision and loyalty (affective commitment, turnover intentions) and efficacy in the workplace (occupational self-efficacy, innovative team climate) and focused on physical (somatic complaints, general health

index) and mental health (emotional exhaustion, work engagement) as potential mediators in these relationships. In particular, we assumed that abusive supervision decreases followers' loyalty and efficacy expectations through a decrease in their mental and physical health.

To explore this research question, we approached organizations from the finance sector (70.7%), the public administration sector (18.5%), the education sector (4.8%), and the mechanical engineering sector (5.0%) in Germany. A three-wave study was conducted. At the first point of measurement (T1), 1,277 employees (75.5% female) with a mean age of $M=40.31$ years ($SD=10.29$) evaluated the behaviour of their leaders. Abusive supervision was found to be quite a rare phenomenon with about two third of the participants (68.1%) disagreeing to being a victim of any kind of abusive behavior from their supervisors at all, and only 2% reporting on being the target of such behavior from time to time. Overall, data from 903 employees could be matched across all three waves (time-lag between T1 and T2: 14 months, and between T2 and T3: 6 months) and were used for the analyses. At T2 employees were questioned about their physical and mental health, and at T3 about their loyalty towards their organization, and their efficacy in the workplace.

In line with our assumptions, mediation analyses found abusive supervision to be negatively related to affective commitment, occupational self-efficacy, and innovative team climate, and positively related to turnover intentions through decreased mental and physical health. Practical implications will be discussed with a particular focus being how to weaken harassment behavior by supervisors.

Paper 2: Do Transformational Leaders Influence Job Crafting, Burnout And Work Engagement? A Longitudinal Field Study.

Karina Nielsen¹, Kevin Daniels¹, Marisa Salanova², Thomas Clausen³

¹University of East Anglia, Norwich, UK, ²University of Castellon, Castellon, Spain, ³NRCWE, Copenhagen, Denmark

Introduction: In recent years, increased attention has been drawn to the role leader's play in influencing employee well-being. This (mainly cross-sectional) research has produced inconsistent results (Skakon et al., 2010). A possible explanation for this inconsistency is that such leaders influence their followers' job crafting behaviours, i.e. how followers shape their own working conditions (Nielsen & Abildgaard, 2012) and that followers perceive their leaders in different ways (differentiated transformational leadership).

On the one hand, when followers perceive leaders as paying special attention to them and as encouraging them to perform "above and beyond the call of duty" this may inspire followers to put in extra effort, i.e. increase the quantitative demands of the job. On the other hand, research has found that followers become dependent on their leaders and thus are less creative (Tourish et al., 2013). Therefore we suggest that followers may come to rely on their leaders for creating challenges for them at work. These mechanisms may both lead to high work engagement but also burnout because creating more work may lead to engagement but may lead to higher burnout as they become over activated. In this study we test these complex mechanisms.

Method: The study used a 12-month two-wave longitudinal questionnaire survey design. On both occasions, participants were asked questions about their burnout, work engagement, job crafting behaviours. They were also asked to rate their immediate manager (leader) on his or her transformational leadership behaviours. The sample consisted of mail delivery workers in a national postal service ($n=191$).

Results: Multilevel regression analyses showed that over time, transformational leadership was not related to crafting quantitative job demands but was inversely related to crafting a challenging job. Over time, transformational leadership was related to higher levels of burnout

but was unrelated to work engagement. Transformational leadership at T1 was negatively related to crafting challenging job demands at T2, and crafting challenging demands was positively related to engagement T2 suggesting an indirect effect.

Discussion: Because of its longitudinal design, the contributions of this study are that the benefits and costs of transformational leadership may be time dependent, and that the effects of transformational leadership may be dependent of how individuals perceive their leader compared to peers. Our results indicate that the effects of differentiated transformational leadership may, over time, have both positive and negative effects on employee well-being, thus alluding to a dark side of transformational leadership (Tourish, 2013).

Paper 3: Managing Sickness Absence In Organizations: Exploring the Role of the Transformational Leader.

Karina Nielsen, Kevin Daniels

University of East Anglia, Norwich, UK

Introduction: In Europe, an estimated 367 million working days were lost in 2007 due to work-related health problems (Eurostat, 2010). Presenteeism (showing up for work when ill: Johns, 2010) might exacerbate medical conditions, damage quality of working life, and lead to impressions of incompetence (Johns, 2010).

A critical issue for organizations concerns how leaders and managers can minimise sickness absence and presenteeism. Transformational leaders may play an important role in employees' presenteeism and sickness absenteeism patterns. In this study, we examine the relationships between presenteeism, sickness absenteeism, and transformational leadership. We propose that transformational leadership may have a direct inverse effect on sickness absence. However, because transformational leaders motivate their employees to perform "above and beyond the call of duty" (Bass & Riggio, 2006), it is possible that transformational leadership interacts with presenteeism to predict absence. It is conceivable that ill followers of transformational leaders who attend work will be motivated to work to their full capacity in the short-term; although in the longer-term, working at full capacity when ill may lead to longer term problems requiring sick leave.

Methods: In Study 1 and Study 2, a questionnaire on followers' perceptions of their line manager's transformational leadership behaviors, sickness absenteeism and presenteeism was distributed. Study 1 (n = 813) involved a cross-sectional study. Leaders and their employees were recruited from three large companies. Study 2 involved a longitudinal study (n = 407), whereby Time 1 levels of presenteeism and transformational leadership were used to predict Time 2 levels of absence, after controlling for Time 1 absence.

Results: Transformational leadership was not directly associated with absence in Study 1 but was inversely associated with absence in Study 2. However, in both studies, employees with high levels of presenteeism and a transformational leader reported the highest levels of sickness absenteeism.

Discussion: These results suggest that transformational leaders interact with complex social processes around group norms, such that some employees in groups with transformational leaders may have increased sickness absence rates if they have high levels of presenteeism. The results also raise the question as to whether transformational leaders always show the right values – they may provide high levels of cohesion, commitment, trust, and motivation at the expense of longer-term employee health. Thus our results link into the discussion of 'the dark side' of transformational leadership (Tourish et al., 2013).

Paper 4: Patterns of ‘Good’ and ‘Bad’ Leadership Behaviours, and their Relationships with Individual Outcomes.

Anders Skogstad¹, Guy Notelaers²

¹*University of Bergen, Bergen, Norway,* ²*Radboud University Nijmegen, Nijmegen, The Netherlands*

Traditionally leadership has been equated with ‘good’ and effective leadership. However, all human beings are capable of enacting ‘good’ as well as ‘bad’ deeds. Accordingly, a basic premise of human life is experiencing positive as well as negative social exchanges. In line with this, a high number of studies have investigated constructive, alternatively destructive forms of leadership, and their effects on outcomes. However, few leadership studies have systematically explored the prevalence of both constructive and destructive forms of leadership, and their relationships with outcomes. Yet, in a sample of 327 workers separable positive and negative dimensions of abusive and supportive leadership behaviour were found. Another study showed significant interactive effects of supervisor support and supervisor undermining on five outcomes. In a representative Norwegian sample a pattern/cluster approach statistically outperformed a factorial approach identifying seven clusters containing constructive, destructive as well as combinations of the two, and systematic relationships with job satisfaction, depression and anxiety.

The present study aims to contribute to this infrequent stream of research that considers the possible effect of both destructive and constructive leadership behaviours on subordinates. In a cross-sectional sample of 168 employees (response-rate= 65%) participating in part time university studies the following variables were measured: transformational, laissez-faire and destructive leadership; intentions to quit; acquiescent silence; satisfaction with the immediate leader; and work engagement.

To deal with the ordinal response scales and non-normality we modelled both factorial and patterned/cluster approaches (LCC) in Latent GOLD 4.5. Next, we evaluated the need for different latent segments to explain the outcomes by the leadership behaviours. The LC regression model allows for the fact that these estimates of leadership may differ for different latent segments. If two or more latent segments fit better to the data than one segment, heterogeneity exists.

The results showed that the unrestricted latent class model was statistically inferior to a confirmatory latent class factor model that distinguished between the three factors. The BIC of different latent class regression analyses indicated that for acquiescent silence, work engagement and intentions to quit, two or more latent segments were more appropriate than one segment, which was only the case for satisfaction with the leader. No significant interactions were found because the cross tabulation of high transformational, and high destructive or laissez-faire behaviours, yielded no single observation. The present study shows the importance of studying complex patterns of ‘good’ and ‘bad’ leadership to explain important outcomes in organizations.

Paper 5: Inconsistent Leadership and Employee Health and Safety.

E. Kevin Kelloway¹, Jane Mullen², Lori Francis¹, Kate Dupre³, Wendy Carroll¹

¹*St. Mary's University, Halifax, Canada,* ²*Mount Allison University, Sackville, Canada,*

³*Memorial University of Newfoundland Saint John's, St John's, Canada*

Leadership research has increasingly adopted a “trait” perspective in which an individual's leadership style is assumed to be consistent over time. There is little conceptual or empirical support for this position – theories such as the theory of transformational leadership were explicitly defined in terms of the frequency of engaging in certain behaviours rather than enduring leadership traits.

Kelloway et al. (2006) argued, and empirically demonstrated, that individuals could engage in both transformational and passive leadership behaviours. More recently, Mullen et al. (2009) defined inconsistent leaders as those who engage in both transformational and passive leadership behaviours. They demonstrated that inconsistent leadership had detrimental effects on employees' safety-related behaviours. The current study both replicates and extends these findings.

Based on a sample of 598 Atlantic Canadian employees, the effects of inconsistent leadership (i.e., the interaction of transformational and passive leadership, Mullen et al. 2009) on employees' self-reported psychological well-being (i.e., the GHQ) and safety behaviours (i.e., participation and compliance) were examined.

Moderated regression analyses resulted in the identification of significant ($p < .05$) prediction of the criteria by the interaction term in each case. Analyses of the simple slopes comprising the interactions suggested that in each case, engaging in passive leadership behaviours reduced the generally beneficial effects of engaging in transformational leadership behaviours resulting in attenuated effects of transformational leadership.

These results replicate and extend those of Mullen et al. (2009) and demonstrate the importance of consistency in leadership behaviours. When leaders engage in more positive (e.g., transformational) behaviours only some of the time, the positive effects of such behaviour on employee well-being and safety is reduced. The implications for leadership development and future research will be discussed.

Symposium Title: Balancing Work with Life: A Gender Perspective.

Prudence Milliar

University of the Sunshine Coast, Maroochydore, Queensland, Australia

Work-life balance remains an important feature of the work environment. This symposium brings together research from different groups to explore facets of the work-life interface. The research is drawn from the following data sources: the 4th European Working Conditions survey; a cross-section of English and Australian women; and a small number of couples, with one partner working in the mining sector in Australia. After the presentations, a discussant will pull together the common themes that arise and facilitate the audience discussion.

The first two papers investigated the predictors of stress. Using data from the European Working Conditions survey Paper 1 observed key gender differences in the exposure to workplace and hazards in the home. These differences form the basis of recommendations for policy and practices for governments and organizations. In Paper 2, the effects of holiday activities on job satisfaction, stress and well-being were explored amongst women, over and above the presence of their personal and workplace resources. Workplace resources mediated the benefits of holidays on job satisfaction, whilst holidays added to their resources, buffering the effects of menopausal symptoms, and increasing well-being.

The next two papers considered work-life balance across three quite different groups. In Paper 3, the European Working Conditions Survey allowed a focus on the determinants of work-life balance. For men, longer hours per week negatively impacted on their work-life balance, whereas for women, this involved a diverse range of work and family issues.

In Paper 4, the effects of sleep and exercise were considered in the context of maintaining well-being. The findings showed that more sleep and regular exercise positively influenced well-being, above self-efficacy and a supportive work-family culture.

The final paper considered the work-family balance of couples where the husband was employed on a fly-in, fly-out schedule. When the husbands were away, the wives managed all aspects of the work-family interface but the household tasks were evenly shared when they returned. The challenge of maintaining relationships was made easier by shared goals and open communication.

In conclusion, the demands that men and women face in managing their work and family roles vary with their roles and resources. Long hours, psychological and physical demands, schedules, and family situations impact on stress and work-life balance, whilst holidays, exercise and sleep, give individuals additional resources to use in their lives, along with their personal and workplace resources to increase well-being, job satisfaction and improve mental health.

Paper 1: An Investigation of the Predicators for Occupational and Non-Occupational Factors Associated with Stress-Related Ailments of Men and Women: A Secondary Analysis of the 4th European Working Conditions Survey.

Juliet Hassard¹, Stavroula Leka², Amanda Griffiths², Tom Cox¹

¹*The Centre for Sustainable Working Life, Birkbeck College, London, UK,* ²*University of Nottingham, Nottingham, UK*

A growing body of evidence indicates that the aetiological factors that predict and underpin men's and women's health and health-related behaviours in community samples can differ from each other (Denton & Walters, 1999; Walters et al., 2002). Limited research has looked at the contributory role of gender and its respective impact on men's and women's health in the workplace (Messing & Stellman, 2006). The aim of the current study is to gain a holistic understanding of the psychosocial processes and mechanisms, both inside and outside the workplace, that are associated with European women's and men's self-reported stress-related ailments.

The sample was derived from the 4th European Working Conditions survey and included vocationally active European men and women (>35 hours per week; n = 9790; 31 countries; 43% women). Composite measures were developed from the literature and psychometrically validated in relation to key constructs. Mean difference tests and effect sizes were calculated to test the presence of structural level gender differences amongst the independent variables. Subsequently, a series of hierarchical multiple regressions were conducted by gender to examine the predictors of stress-related ailments and comparatively assessed. Multi-group moderation analysis was conducted to test the presence of gender differences in observed predicative pathways. A cross validation process was operationalised across all analyses to assess the reliability and validity of the observed findings.

Large structural gender differences were observed in relation to: exposure to ambient hazards and time spent cooking and cleaning. Small structural gender differences were also observed in relation to a number of other dimensions of working conditions and domestic duties, including: exposure to biological and chemical hazards, long working hours, psychologically demanding work, flexible work organization, and taking care of and educating children. The comparative analysis observed four noteworthy differences amongst male and female samples in relation to four predicative factors: time pressure, psychologically demanding work, exposure to ambient hazards, and social support. The multi-group moderation analysis observed three predicative pathways to differ significantly by gender: exposure to ambient conditions, time pressure and psychologically demanding work.

The findings of the study provide additional evidence to suggest that the aetiological factors underpinning and influencing men's and women's health can be gender-specific in nature. The presentation will include implications for the development of policies and how practices underpinned by a gender-sensitive approach can be implemented in workplaces.

Paper 2: Holidays and their Effect on Women's Job Satisfaction and Mental Health, in the Context of Personal and Workplace Resources.

Prudence Millar¹, Roxane Gervais²

¹University of the Sunshine Coast, Maroochydore, Queensland, Australia, ²Health and Safety Laboratory, Buxton, UK

Changes to technology in recent years mean that employees remain more engaged with their work on weekends, on holidays, and during leisure times. However, recent research has shown the benefits of being able to disengage from work; as a way to recharge energy and maintain good health. Positive activities, whether relaxing or being physically active, have restorative benefits for the individual, whereas chronic work demands that extend into the evening or weekend do not improve mood or allow the individual to feel rested. The current study examined whether past holiday activities would continue to have positive benefits for women's well-being, over and above the expected effects of personal and workplace resources.

Women (n = 423) from Australia and Europe took part in an online survey and rated various aspects of their last holidays (e.g., relaxation, physical activity, sociability). They also completed measures of their personal (e.g., optimism, self-efficacy) and workplace (e.g., skill discretion, social support) resources, their physical health (including levels of menopausal symptoms), and their mental health and job and life satisfaction. The five holiday items formed one factor ($\alpha=.78$) that represented pleasurable and relaxing holiday activities.

Hierarchical multiple regressions were used, with personal resources and the holiday effects as Block 1 and the workplace resources entered as Block 2. Of the outcomes, greater workplace resources were the strongest contributors for more job satisfaction, whereas personal resource (particularly optimism) and the holiday scale were predictors of greater life satisfaction and positive affect, and less stress and negative affect. Women's menopausal symptoms also added to stress and negative affect. Interestingly, work hours did not predict any of the outcomes or contribute to stress.

The holiday scale was a significant predictor for each of the outcomes, predicting greater life satisfaction, more positive affect, less negative affect, and less stress, with the effect on job satisfaction mediated by the greater presence of workplace resources.

The positive aspects of holidays, such as being able to relax or be active, had longer-term benefits for individuals that are separate from their other resources, such as optimism and supportive workplace conditions. For women, these opportunities for rest and recuperation add to their resources, buffering the effects of menopausal symptoms, and increasing well-being and mental health. Employers should also support their employees to take advantage of holidays and leisure times, as an adjunct to better workplace conditions, as these will feed into greater job satisfaction.

Paper 3: The Occupational and Non-Occupational Factors that Predict Men's and Women's Work-Life Balance: Do Gender Differences Exist?

Juliet Hassard¹, Stavroula Leka², Amanda Griffiths², Tom Cox¹

¹The Centre for Sustainable Working Life, Birkbeck College, London, UK, ²University of Nottingham, Nottingham, UK

Many contemporary studies of work and home life either ignore gender or take it for granted. There is therefore a need for more research that examines which factors differentially impact men and women's work-family interface. The current study examined the occupational, family, and socio-demographic factors that affect European men and women's work-life balance, using a subsample of the 4th European Working Conditions Survey. Individuals were included if they worked full-time (35 hours or more per week) resulting in a final sample of 9979 workers

from 31 countries. Work-life balance was measured using a single item: “Do your working hours fit in with your family or social commitment outside work”. Work factors measured included: working hours, time pressure, psychological demands, exposure to ambient, chemical or biological hazards, opportunities for career development, feeling valued at work, social support, job security, and flexible work organization.

The demographic factors measured included income and education level. Home and domestic factors were measured as relationship status, size of household, time spent educating and caring for children, and the time spent cooking and cleaning. The sample was randomly divided into two samples, with the first sample (n = 5005) used for model development and the second (n = 4974) used for cross validation purposes. Hierarchical multiple regressions were used to examine the predictors of work-life balance, with work factors as Block 1, socio-demographic factors as Block 2, and home factors/ domestic duties as Block 3. The analysis was conducted separately for men and women.

Amongst the vocationally active men, only one factor was found to significantly predicate poorer work-life balance: longer working hours. This finding was replicated in the cross validation sample. In contrast, several factors were observed to predict poor work-life balance amongst European women who work full time. For the vocationally active European women, long working hours, not feeling valued at work, increased opportunities for career development, increased job insecurity, and a larger household decreased their work-life balance. These findings were replicated in the cross validation sample.

The results of the current study suggest that amongst women there is a greater and more diverse set of work and home factors associated with poorer work-life balance. Whilst for men, only long hours were problematic, for women, hours and workplace challenges and more responsibilities were problematic. The presentation will discuss the implications of the findings for future research and how employers can consider the development and implementation of gender-sensitive practices.

Paper 4: Maintaining Balance within the Workplace: Assessing the Subjective Well-Being of Women who Work.

Roxane Gervais¹, Prudence Millear²

¹*Health and Safety Laboratory, Buxton, UK,* ²*University of the Sunshine Coast, Maroochydore, Queensland, Australia*

The work environment is dynamic; organizational change is fairly constant due to the different facets that impact on its work processes, such as globalisation, with workers having to adapt to changes in work conditions. In adapting to these changes workers' ability to manage their time may be compromised, with less time to spend on health-improving activities.

Well-being is maintained and improved through health-related behaviours such as adequate levels of sleep and exercise, thereby ensuring more balance to life. Lack of adequate sleep can result in poorer health, job performance and social functioning (Scott, 1994), while good sleep is necessary to maintain well-being (Steptoe et al., 2008). Similarly, frequent exercise has been shown to contribute to lower stress and to increase well-being (Garcia et al., 2012). The inability to engage in these activities through difficulty in balancing work with life could affect workers' subjective well-being. Subjective well-being's many benefits to individuals are well documented, as displayed through, for example, positive affect that contributes to favourable outcomes including better coping and lower stress (Lyubomirsky, King & Diener, 2005). The present study tested whether women who were able to exercise more and those who obtained adequate sleep would have higher levels of subjective well-being than those who did not.

An online questionnaire was distributed through snowball sampling to working women. The sample (n= 652) completed scales to assess positive affect (PA) and negative affect (NA), satisfaction with life, general self-efficacy, dispositional optimism, work-family culture, work and non-work hassles, hours of sleep, time to exercise and demographic information. The women's mean age was 51.47 (SD = 6.74), they had two children on average (M = 1.87, SD = 1.39) and worked an average week (35.56 hours, SD = 11.65). Three models were tested using hierarchical regression analyses with positive affect (PA), negative affect (NA) and satisfaction with life as the dependent variables.

Sleep and exercise were predictors of PA, NA and satisfaction with life, but neither organizational support through work-family culture nor self-efficacy (except for PA) were predictors of NA or life satisfaction. These results support previous research linking good sleep and regular exercise to increased well-being. The links between physical health and mental and emotional well-being are established. However, the present study shows support for sleep and exercise as predictors of subjective well-being, rather than individual self-belief constructs such as self-efficacy, or organizational support as provided through a positive work-family culture. These findings will be discussed further at the conference.

Paper 5: Balancing Work, Parent and Spouse Roles in Fly-In, Fly-Out (FIFO) Couples.

Danielle Giffin, Prudence Milllear

University of the Sunshine Coast, Maroochydore, Queensland, Australia

In contrast to stagnant economic conditions in many countries, the mining industry in Australia has grown substantially in the last decade. Whilst many families have moved to regional and remote towns to take up employment, many employees leave their families in cities and coastal towns and travel to work. The rosters for the Fly-In, Fly-Out (FIFO) workers vary greatly, from 'week-on/week-off' to 'three-on/one-off', depending on seniority, distance to mine, and type of work involved. However, leaving families behind poses significant challenges, namely; how to achieve any level of work-life balance and keep families intact over time.

The current study used interviews to explore the work-life balance, marital and parental satisfaction for couples, where the spouse worked on FIFO rosters. Although a small sample (n= 8 couples) was used, theoretical saturation was achieved amongst the couples: regardless of roster or age of children, they faced similar work and family issues and used similar strategies to manage the absence and presence of the worker.

The first pivot was that the decision to undertake FIFO work was openly and mutually agreed upon by the couple, as any reticence undermined subsequent coping with changes in family dynamics. Unlike couples with normal working hours, once the FIFO worker was away, he was effectively isolated from daily family decisions. Women combined the work-family interface with the support of other FIFO families and facilitated daily communication between the fathers and their children. The loneliness of both parents when separated was contrasted to the undivided attention that the father could give to his wife and family on return. Home time could be busy, recovering from long work hours, focusing on family matters, completing chores, and catching up with friends. While shorter rosters were less disruptive and older children less demanding, these came with more senior positions or for older couples.

The unexpected positives from the interviews were that the periods of separation sharpened the appreciation of the couple's time together and that working toward a common goal had strengthened the couples' relationships. FIFO work receives considerably higher pay than most comparable work and the increased financial security was important to the families. Work-life balance for these couples was the sum of much longer periods that is usually measured, as the balance was a weighing of not only time apart and together, but about shared family goals and the satisfaction of making their challenging situation function smoothly over time.

Symposium title: How Leaders and Employees Can, Themselves, Contribute To Employee Well-Being – Longitudinal and Multilevel Perspectives.

Jari Hakanen, Rebecca Brauchli

¹*Finnish Institute of Occupational Health, Helsinki, Finland*, ²*University of Zurich, Zurich, Switzerland*

Introduction and aim: This symposium brings together researchers in the field of positive occupational health psychology (POHP) from three countries. POHP is a relevant topic in today's working life, where employees are expected to be engaged in their work, show initiative and be innovative and where organizations should arrange working conditions with motivating potential and energising resources.

The purpose of this symposium is to discuss how not only supervisors, but also employees themselves, can contribute to employee thriving. Specifically, we focus on key constructs in terms of leadership (i.e., LMX, servant leadership), personal resources (i.e. sense of coherence), and initiative (i.e. job crafting) in relation to employee engagement. Apart from its theoretical contributions, this symposium also adds to POHP by exemplifying state of the art methodologies: four of the studies use a longitudinal study design and one study employs a multilevel design.

Method and results: The symposium consists of five contributions. The first paper by Toppinen-Tanner et al. identifies supervisory support (LMX) as a resource that is particularly important for the development of newcomers' work engagement. The second paper by Vogt et al. shows that the "Sense of Coherence" personal resource and job resources reciprocally influence each other and that they can, together, lead to work engagement. In the third contribution, Brauchli et al. examine whether job and/or personal resources have the potential to buffer the loss spiral between job demands and work family conflict. The fourth contribution by Vanbelle et al. presents and validates a new scale that conceptualises job crafting as making changes in one's jobs to optimize one's functioning in terms of well-being, work-related attitudes, and behaviour. Finally, in the fifth contribution, Hakanen et al. show that servant leadership and job crafting can boost work engagement both in teams and among individuals.

Conclusion: Together these longitudinal/multilevel studies expand the current knowledge on how organizations, leaders, and employees can create a work environment that is engaging, inspiring, and innovative.

Paper 1: Job Resources and Quality of Leadership as Predictors of Work Engagement among Organizational Newcomers.

Salla Toppinen-Tanner¹, Jari Hakanen¹, Markku Jokisaari², Pertti Mutanen¹, Mikko Nykänen¹, Jukka Vuori¹

¹*Finnish Institute of Occupational Health, Helsinki, Finland*, ²*Durham University Business School, Durham, UK*

Introduction: It has been suggested that organizational socialisation is a critical time period for the development of work engagement among newcomers. During this time period newcomers, if successful in the socialisation process, learn their tasks, and develop their social relationships with co-workers and supervisors, as well as, identify with and commit to the organization. Organizations would benefit from identifying and supporting the resources for development of work engagement during the socialisation period as one indicator of psychological well-being.

Aim: The aim of this three-wave longitudinal study was to investigate which job resources predict work engagement among organizational newcomers within 18 months after entry. Secondly, the role of quality of leadership was investigated during this process.

Method: To test the study model, we used longitudinal mixed model to assess the effects of job resources and leader-member exchange (LMX) on work engagement with time. The data consisted of 249 newcomers (85% women) recruited within a six month time window in three municipal organizations, who responded to questionnaire surveys within 3 months after entry, and again after 13 (T2) and 18 months (T3) from the first survey. Task mastery, role clarity and social integration (Morrison, 1993), as well as LMX (Scandura & Graen, 1984) were investigated as resources for work engagement, which was measured using the nine-item version of the Utrecht Work Engagement Scale (Schaufeli et al., 2002).

Results: The results showed that the level of work engagement decreased after organizational entry. All of the job resources predicted work engagement over time, and the effect of the LMX was the strongest. Analysis further showed that LMX mediated the effects of task mastery, role clarity and social integration on work engagement.

Conclusions: A decrease in work engagement after organizational entry is in line with observations on the "honey moon effect" after organizational entry. This means that newcomers tend to evaluate their new workplace more positively in the beginning and these positive evaluations are likely to decline. The results of this study showed that leadership is especially important during organizational entry, as it seems that the positive effects of other job resources are mediated by the evaluations of the quality of the leadership. Good quality of relationship between leaders and followers seems to be a key resource during the socialisation phase, and may foster the engagement of newcomers.

Paper 2: The Role of Sense of Coherence in the Motivational Process of the Job Demands-Resources Model.

Katharina Vogt¹, Gregor Jenny², Rebecca Brauchli², Jari Hakanen³, Georg Bauer²

¹ETH Zurich, Zurich, Switzerland, ²University of Zurich, Zurich, Switzerland, ³Finnish Institute of Occupational Health, Helsinki, Finland

Introduction: A number of studies show that employee functioning and well-being is not only determined by job characteristics, but also by personal resources. In the context of the job demands-resources (JD-R) model, the effect of personal resources has been discussed as 1) antecedents of job demands and job resources, 2) moderating effect, and 3) mediating effect between job resources and well-being (Van den Broeck et al., 2013). A personal resource of wide interest in occupational health psychology is Sense of Coherence (SoC), i.e. sense of comprehensibility, manageability, and meaningfulness.

SoC originates from the theory of Salutogenesis (Antonovsky, 1979) and reveals strong relations with health and well-being. Thus, it seems of further interest to analyse SoC as a personal resource in the context of the JD-R model.

Aim: This study aimed to systematically test different possible roles of SoC in the motivational process of the JD-R model as follows: 1) SoC may have a direct effect on job resources, 2) SoC may boost the effect of job resources on work engagement (as employees with a high SoC might use their resources more effectively), and 3) SoC may also act as a mediator between job resources and work engagement.

Method: The study used longitudinal questionnaire data from an online convenience sample of employees with two waves of measurement and a three-month interval (n= 1,230).

Results: Results of structural equation modelling showed a direct effect of SoC at T1 on job resources at T2. No boosting effect of SoC on the relation between job resources and work engagement was found. However, SoC also partially mediated the effect of job resources at T1 on work engagement at T2.

Conclusions: We found that SoC as a personal resource may foster future experience of job resources. This relationship was reciprocal as job resources also influenced SoC. The partial mediation effect of SoC shows that providing resources in the workplace might help building up the SoC of employees, which again will lead to positive outcomes such as work engagement. Overall, this study presents a systematic assessment of the role of SoC in the motivational process by using longitudinal data from a broad employee sample.

Paper 3: The Power of Resources – Can they Break the Loss Spiral between Job Demands and Work-Family Conflict?

Rebecca Brauchli¹, Katharina Vogt², Jari Hakanen³, Georg Bauer¹

¹University of Zurich, Zurich, Switzerland, ²ETH Zurich, Zurich, Switzerland, ³Finnish Institute of Occupational Health, Helsinki, Finland

Introduction: As research suggests, there is a loss spiral between job demands and work-family conflict (see for example Demerouti, Bakker, & Bulters, 2004). According to the conservation of resources theory (Hobfoll, 1989, 2001), resources are essential when explaining the development of, and coping with, stress. People strive to obtain, retain and protect their resources. If people gain resources, stress is expected to be reduced. Thus, resource gains might have the power to break the vicious circle between job demands and work-family conflict since they facilitate recovery in the long term. As a consequence, job demands are expected to have a reduced impact on work-family conflict as well as vice versa (work-family conflict on job demands).

Aim: Firstly, the present study aimed to replicate the finding that there is a loss spiral between job demands and work-family conflict. Secondly, the study aimed to investigate whether job resources as well as personal resources, namely self-efficacy, have a beneficial impact on the relationships between job demands and work-family conflict.

Method: These issues were addressed using longitudinal questionnaire data from 3 waves with a 1-year time interval. Each wave comprises more than 3,000 participants so that data of more than 1,000 participants (n= 1,658) could be used for statistical analyses.

Results: Results of structural equation modelling showed, first of all, that there is, as expected, a loss spiral between job demands and work-family conflict. Furthermore, results indicated significant buffering effects of job resources as well as self-efficacy on the relationship between job demands (t1) and work-family conflict (t2). However, results were inconsistent and/or not significant concerning 1) the reverse causal direction (work-family conflict t1 and job demands t2) and 2) the relationships between t2 and t3.

Conclusion: Overall, some evidence was identified that job as well as personal resources might have the potential to break the vicious circle between job demands and work-family conflict. Building up job and personal resources might therefore not only be relevant because of their effects on positive outcomes such as work engagement, but also because of their ability to buffer the loss spiral between job demands and work-family conflict. One reason for the inconsistent findings might lie in the one-year time lag between two waves as we detected only small effects and these were often not significant.

Paper 4: Taking the Purpose of Job Crafting into Account: Development and Validation of a General Scale.

Els Vanbelle, Anja Van den Broeck, Hans De Witte
KU Leuven, Leuven, Belgium

Introduction: The development and validation of a general scale of job crafting is presented which builds on the two streams in the literature on job crafting. The first stream studies task, relationship and cognitive crafting in a qualitative way (Wrzesniewski & Dutton, 2001). The

second focuses on “specific job characteristics crafting”, e.g. the actual changes employees make to balance their job demands and resources with their personal abilities and needs (Tims & Bakker, 2010). Starting from the job demands resources model, Tims, Bakker and Derks (2012) developed and validated a job crafting scale in which they focus on the crafting of specific job characteristics. We conceptualise job crafting as making changes in one’s job in order to optimize one’s functioning in terms of well-being, work-related attitudes and behaviour.

Aim: Following Tims and colleagues, a quantitative approach to job crafting was strived for. However, the aim was to develop and validate a shorter measurement scale of job crafting, which fitted the presenting authors definition.

Methods: In formulating seven items the purpose of job crafting was taken into account. The items were tested in both cross-sectional (sample 1) and longitudinal data (sample 2). First, principal component analysis was conducted, in which four items loaded high on the first factor. Reliability analyses indicated satisfying internal consistency of this four-item scale as alpha’s scores were .81 and higher. A sample item from the scale is; ‘I make changes in my job to feel better’.

Results: To establish divergent validity, a confirmatory factor analysis was conducted to differentiate job crafting from work engagement. The results favoured the hypothesised model, in which job crafting and work engagement were predicted to be distinct concepts. Furthermore, results showed significant associations between job crafting and autonomy, decision making and social support of the supervisor. The results also showed that employees who crafted their job, scored higher on indicators of optimal functioning such as work engagement, needs-supplies fit and motivation.

Conclusions: In sum, the present authors developed a short scale to measure job crafting and in which the purpose of job crafting behaviour was taken into account. First analyses provided evidence for the reliability and validity of the scale. In future research, the present authors aim to investigate the validity of this scale more thoroughly. This is envisaged to be achieved by including concepts such as proactivity (Parker, Bindl, & Strauss, 2010), job crafting by Tims et al. (2010, 2012) and other indicators of employee functioning. In addition future inspection of the divergent, convergent and predictive validity of the scale is anticipated to be performed. As such, the added value of this scale in future job crafting research will be demonstrated and discussed.

Paper 5: Does Servant Leadership Boost Work Engagement Via Job Crafting? An Individual and Team Level Study.

Jari Hakanen, Pertti Mutanen

Finnish Institute of Occupational Health, Helsinki, Finland

Introduction: In order to have flourishing employees and workplaces, leaders need to lead and motivate both teams and individuals. Of the leadership theories, servant leadership has the strongest focus on going beyond leader’s self-interest and on employee well-being. In addition to the impact of positive leadership practices, employees themselves can craft their jobs, i.e., aim to improve their working conditions to feel more engaged in their jobs.

Aim: This multilevel study investigated whether servant leadership was positively associated with work engagement via job crafting on both individual and team levels. In addition, the cross-level interactions, i.e. whether an association between variables on the individual level would depend on some group level variable, were examined.

Method: Multi-level structural equation modelling (ML-SEM) was employed to test the study model. The data consisted of 1415 employees working in 229 teams in social and health care

organizations. Servant leadership was measured with 18 items and five dimensions from the Servant Leadership Survey (SLS) developed by Van Dierendonck and Nuijten (2011). Job crafting was assessed with 11 items derived from the Dutch job crafting scale based on the measure of Tims et al. (2012). Finally, work engagement was measured using the nine-item version of the Utrecht Work Engagement Scale (Schaufeli et al., 2002).

Results: Firstly, the results indicated that the ICC for servant leadership was 0.29, for job crafting 0.11, and for work engagement 0.12, thus suggesting that these phenomena are shared within the teams. Secondly, as expected, the results showed that on the individual level, job crafting partially mediated the impact of servant leadership on work engagement. However, no mediation effect on the team level was found. Instead, on the team level both servant leadership and job crafting were positively associated with work engagement. Thirdly, investigating cross-level interactions showed that shared positive perceptions of servant leadership strengthened the relationship between servant leadership and job crafting on the individual level.

Conclusion: All in all, although the tested associations somewhat differed on the team and individual levels, it seems that servant leadership and job crafting can boost work engagement both in teams and among individuals.

Symposium title: Building and Restoring Resources at Work: Intervention Success and Boundary Conditions

M. Gloria González-Morales¹, Anna Steidle²

¹University of Guelph, Guelph, ON, Canada, ²Universität Hohenheim, Stuttgart, Baden-Württemberg, Germany

Possessing the resources to cope with daily hassles and major stressful events, at work and outside of it, is of core interest not only for the individual, but also for organizations and societies. The scope of this symposium is to present and discuss the effectiveness and limitations of work-related interventions that aim to build different types of resources (e.g., emotional, social, cognitive, energetic).

The proposed session on interventions aimed to build our resources is inspired by Positive Psychology which intends "...to catalyze a change in the focus of psychology from pre-occupation only with repairing the worst things in life to also building positive qualities" (Seligman & Csikszentmihalyi, 2000, p. 5). Extensive research has shown beneficial effects of Positive Psychology on individuals' well-being (e.g. Lyubomirsky, Sheldon, & Schkade, 2006; Seligman, Steen, Park, & Peterson, 2005) however, to date more research from an occupational health psychology perspective is needed to evaluate effects of work-related interventions inspired by positive psychology and focused on resource building.

The five papers to be presented in this symposium examine effects of different resource-oriented interventions aiming to improve participants' well-being by helping employees deal with different issues: experiencing positive emotions and engagement during the working day (Hoppe & Michel), conserving and restoring resources under high work load (Steidle, Gonzalez-Morales & O'Shea), maintaining work-life balance (Michel, Bosch, Rexroth) and facing major work-life change events like retirement (Seiferling & Michel).

By implementing resource-oriented interventions in the workplace for all employees to participate we can solve two main limitations that other types of comprehensive intervention programs have. First, short exercises and online activities can be integrated into the work day and therefore reduce time-conflicts for the participants. Second, resource-oriented interventions allow access to individuals who often refrain from participating in health

promoting programs, either because they do not identify as needing help or because they are not ready to disclose they have a problem and need help.

The presentation of these five studies will stimulate the discussion around the quality and benefit of interventions in different contexts and for different issues. Building on different understandings of resources (Ryan & Deci, 2008; Hobfoll, 2001) and their interchangeability (De Jonge & Dormann, 2006) the discussion will focus on the boundary conditions and challenges (type of participants, pre-intervention levels, type of exercise) of this type of interventions, guiding future research and implementation.

Paper 1: Day Level Positive Thinking Intervention to Promote Positive Emotions and Vigour among Administrative Staff

Annekatriin Hoppe¹, Alexandra Michel²

¹*Humboldt University Berlin, Berlin, Germany*, ²*University of Heidelberg, Heidelberg, Germany*

Aim: The aim of this study was to investigate the effects of a day level positive thinking intervention on positive emotions and vigour among administrative staff. In addition, we explored whether morning levels of positive emotions and vigour, as well as the evaluation of the exercise and the reflected work event as pleasant, affected the intervention success.

Method: We used a randomized controlled design with an intervention (N = 30) and a waiting control group (N=31). In the intervention group participants were asked to reflect upon a positive work event each day for two consecutive weeks. In addition, participants filled in a diary in the morning before work and in the evening after work (n = 594 daily measurements). Sixty-nine percent of the participants were female with an average age of 43.4 (± 9.4) years.

Results: Hierarchical linear modelling analyses revealed no positive effects of the intervention on positive emotions and vigour. However, we found that when participants had lower morning levels of positive emotions and, in addition, evaluated the positive work event as pleasant the intervention lead to an increase of positive emotions in the evening. Similarly, when participants had lower morning levels of vigour and evaluated the exercise as pleasant the intervention lead to an increase of vigour in the evening.

Conclusion: The findings indicate that only a selected group of participants benefit from the positive thinking intervention: those with lower levels of positive emotions and vigour in the morning and who at the same time evaluated the intervention as pleasant and desirable. The impact of participants' needs for an intervention will be discussed with regard to intervention success.

Paper 2: Energizing Respite from Work: Daily Savouring of Nature and Relaxation Interventions Promote Vigour

Anna Steidle

University of Hohenheim, Stuttgart, Germany

Aim: The recovery literature proposes that low-strain recovery activities, for instance relaxation, should be particularly beneficial to conserve and restore resources under high work load (e.g., Grossman, Niemann, Schmidt, & Walach, 2004; Sonnentag, Binnewies, & Mojza, 2008, Trougakos & Hideg, 2009). The aim of this study was to investigate the impact of two day level respite interventions on energy resources: relaxation and savouring nature. Moreover, moderator analyses explored the influence of pre-intervention energy resources, self-regulatory strength and recover abilities on intervention effectiveness.

Method: During two consecutive weeks after the Easter holidays, 85 full time administrative employees participated in a randomized controlled study with one waiting control group (N= 31) and two interventions groups. Interventions were executed during the lunch break. The

relaxation intervention consisted of a 7 minute version of Jacobson progressive muscle relaxation (N= 26). In the savouring-nature intervention, participants listened to a natural sound and imagined being in nature (N= 28).

Results: Pre-post-comparisons showed no overall positive effect of the respite interventions on energy levels. However, moderator analyses revealed that the two interventions helped to conserve high levels of vigour among participants with low or medium levels of pre-intervention burnout. Moreover, intervention success required high levels of personal strength (high ego-resilience, high emotional stability) and depended on participant's recovery abilities.

Conclusion: Overall, the results revealed that relaxation and savouring-nature interventions were only beneficial for individuals who did not feel burnt out and who possessed personal strength. Hence, this indicates that even interventions designed to cause little strain require resources and self-regulation to be learned and executed. The importance of intervention demands for invention success will be discussed.

Paper 3: The Role of Daily Resource-Based Exercises at Work in Buffering Daily Depletion and Boosting Initial Resources

Deirdre O'Shea¹, M. Gloria González-Morales²

¹University of Limerick, Limerick, Ireland, ²University of Guelph, Guelph, ON, Canada

Aim: Psychological resource theories tell us that engaging in effortful activities depletes our store of available energy or psychological resources (Baumeister, Muraven, & Tice, 2000). As a type of effortful action, daily work tasks deplete our resources, which may be exacerbated when an individual starts the workday with limited available resources. In this study, we investigated whether performing a daily resource-based exercise buffered against such depletion in terms of fatigue levels and if these exercise could boost our vigour (a core dimension of work engagement).

Method: We used a 10-day quasi-experimental, daily diary design. The experimental group (N=95) completed a questionnaire in the morning, a resource-based exercise during lunch (e.g., savouring a positive work event, reflecting on act of kindness performed during the morning, reappraising a negative event), and a further questionnaire in the evening. The control group (N=23) did not complete the lunch exercise. We used the first week (5 working days) as a training week for participants to practice the exercises, and analysed the effects of perceived benefit on week 2 (5 working days), comprising 388 observations. We assessed morning and evening vigour using 3 items from the Utrecht Work Engagement Scale, adapted for use at the daily level (Bakker & Xanthopoulou, 2009; Demerouti, Bakker, Sonnentag, & Fullagar, 2012). Fatigue was assessed using a one item indicator (Van Hooff, Geurts, Kompier, & Taris, 2007). We controlled for recovery activities (Sonnentag, Binnewies, & Mojza, 2008) performed the day before. Perceived benefit was a one-item measure asking participants how they felt after completing the daily exercise (1 = I feel a lot worse, 5 = I feel a lot better). The control group was assigned the median value (3 = I feel no difference) in order to operationalize the absence of the lunch-exercise.

Results: Random coefficient modelling indicated that the perceived benefit moderated the relationships between morning vigour and evening vigour, but not evening fatigue. The positive relationship between morning and evening vigour was stronger as experienced benefit increased.

Conclusion: The results suggest that even though resource-based exercises may not buffer against the daily depletion of resources (morning fatigue positively predicted evening fatigue and the benefits of the exercise did not moderate this relationship), perceived benefit experienced by participants can boost our morning energy and increase it until the end of our working day.

Paper 4: Benefits of Mindfulness for Work-Life-Balance: Results of an Intervention Study

Alexandra Michel, Christine Bosch, Miriam Rexroth
University of Heidelberg, Heidelberg, Germany

Aim: Aim of this study was to design and evaluate an intervention teaching the use of mindfulness as a cognitive-emotional segmentation strategy in order to promote work-life balance.

Method: Using a randomized waitlist control group design, we evaluated effects of a three-week online self-training intervention to promote work-life-balance. The training was developed in line with boundary theory (Ashforth et al., 2000) and the two-component model of mindfulness (Bishop et al., 2004). In three modules trainees reflected on their personal way of integrating and segmenting work and private life and learned different mindfulness techniques helping to improve their work-life-balance. 246 participants filled in questionnaires before (Time 1; pre-test) and after (Time 2; post-test) the training, 191 participated at a two-week follow-up (Time 3). Participants at Time 1 and Time 2 were on average 41.41 years old (SD = 9.40) and mostly female (71.1%). The sample composition remained stable for the reduced sample size at Time 3.

Results: In line with our assumptions, findings indicate that participants in the experimental group experienced significantly less strain-based work-family conflict and significantly more satisfaction with work-life balance directly after the training and at the follow-up test.

Conclusion: Using short mindfulness techniques helps employees to improve their work-life-balance. Therefore, organizations should consider either to integrate mindfulness techniques into existing health and work-life balance programs or to design new training approaches.

Paper 5: Building Resources for the Transition into Retirement and Beyond: a Group-Coaching Intervention for Retirees-To-Be

Nadine Seiferling, Alexandra Michel
University of Heidelberg, Heidelberg, Germany

Aim: For some employees, the transition into retirement can be a stressful life event (Clemens, 2012). While many studies have showed that people adapt well to retirement, there seems to be a significant minority of retirees that report problems or a decline in well-being after retirement (Wang, 2007). Despite these findings, there are few pre-retirement preparation programs, focusing mainly on financial planning and preparation, and turning a blind eye on other important social and psychological factors (Peila-Shuster, 2012). Therefore, the aim of our study is to design and evaluate a resource-oriented group-coaching program for older employees. Participation in the program should support them to prepare independently for their retirement transition and the life as a retiree.

Method: The program consists of six modules lasting 90 minutes: (1) my present life, (2) my future life, (3) realizing my dreams (4) resources for the future, (5) shaping transitions and (6) making my way. In line with the assumptions of Positive Psychology, each session is designed to promote participants' self-regulation skills, activate and strengthen individual resources and facilitate the development of individual strategies and solutions for their retirement transition and beyond.

Data on subjective well-being (e.g. life satisfaction, health, positive affect), individual resources (e.g. self-efficacy, social support) and retirement expectations is collected before the first coaching session (pre-test), right after the group coaching-program (post-test) as well as eight weeks afterwards (follow-up test). To test the efficacy of the intervention, a waiting-control-group design is used.

Results: Preliminary results from the pilot study indicate that the intervention has positive effects on self-reported well-being, individual resources and retirement expectations.

Conclusion: The results of our pilot study suggest that this intervention is a promising approach to promote older employees' resources and self-regulation skills, and to support them in successfully mastering their retirement transition and adapt to retirement life. In addition, experiences with the group-coaching program and coachees' qualitative feedback will be discussed. Moreover, directions for future research and practice will be derived (e.g. which individual and context factors might influence the intervention effect).

Symposium Title: Recovery From Work: Cognitive and Affective Processes

Sabine Geurts¹, Mark Cropley²

¹*Radboud University Nijmegen, Nijmegen, The Netherlands*, ²*Mark Cropley, Surrey, UK*

In the field of occupational health psychology it is well-established that many workers are exposed to psychosocial work stressors and that high stress exposure has adverse consequences for both individual employees (e.g. health problems) and organizations (e.g. absenteeism and diminished productivity). Sufficient recovery from the load effects built up during work seems to be crucial to prevent adverse health outcomes. Therefore, recovery from work as a preventive or protective mechanism in the work-stress-health relationship deserves special research attention. In this symposium, we will address the importance of sufficient recovery during work hours as well as during free time (evenings, weekends, vacations). In particular, we will focus on cognitive-affective processes that may either hamper recovery (e.g. work-related rumination and negative affect) or facilitate recovery (e.g. psychological detachment from work and positive affect).

The first contribution concerns a study by Noora Jalonen and colleagues among 183 Finnish workers. This study demonstrates to what extent emotional control strategies (i.e. rumination and inhibition) hamper or facilitate recovery experiences (e.g. psychological detachment and relaxation), and whether these strategies moderate the relation between work characteristics (i.e. job skill discretion) and recovery. In the second contribution, Christine Syrek will present recovery data collected among 318 German academic researchers across a free weekend. She investigated to what extent unfinished tasks at the end of a work week (i.e. a job stressor) fostered rumination and, thus, impaired recovery during the free weekend. She further examined to what extent researchers' self-esteem influenced this relationship.

In the third contribution, Mark Cropley will discuss the relationship between affective work-related rumination and sleep (measured subjectively and objectively) among 57 English school teachers before, during, and following a short (1 week) vacation. The fourth contribution concerns a study by Madelon van Hooff among 84 Dutch workers. She examined to what extent recovery (i.e. fatigue and serenity) improves during a free evening after work, thanks to experiences of pleasure (positive affect) during the evening, and to what extent this affective experience adds to other more cognitive-behavioural recovery experiences (e.g. psychological detachment, relaxation and control).

Sabine Geurts will finish up with presenting recovery data collected among Dutch Helicopter Emergency Medical Service pilots across (before, during and after) a series of day and night shifts. She investigated the course of recovery across a series of day shifts and night shifts, as well as the impact of work stressors (i.e. workload and distress during shifts) on recovery.

Paper 1: Job Skill Discretion and Emotion Control Strategies as Antecedents of Recovery from Work

Noora Jalonen, Marja-Liisa Kinnunen, Lea Pulkkinen, Katja Kokko
University of Jyväskylä, Jyväskylä, Finland

Recovery from work has a vital role in securing employees' health and well-being, and therefore it is of great importance to gain an understanding of the factors that enable or hinder employees' recovery. The main purpose of the present study was to examine direct and interactive effects of job skill discretion and emotion control strategies (emotional rumination, emotional inhibition) on recovery experiences (psychological detachment, relaxation, subjective recovery evaluation). The study was conducted among an occupationally heterogeneous sample of middle-aged employees drawn from the Finnish Jyväskylä Longitudinal Study of Personality and Social Development ($n = 183$).

The results indicated that job skill discretion was positively associated with relaxation and subjective recovery evaluation, but unrelated to psychological detachment. A high degree of emotional rumination preceded a risk of having difficulties in psychological detachment and relaxation. Emotional inhibition, in turn, moderated the relationship between job skill discretion and psychological detachment: only in the situation of moderate emotional inhibition, job skill discretion was positively related to psychological detachment.

Our findings suggest that personality factors, such as emotion regulation tendencies, contribute to the success of employee recovery, pointing to the importance of acknowledging these in the development of recovery interventions.

Paper 2: When Friday's Workload Feels Like Monday's: How Unfinished Tasks Enhance Employees' Rumination over the Weekend

Christine Syrek, Conny Antoni, Mareike Hoheluechter
University of Trier, Trier, Germany

In this study we examine the relationship between unfinished tasks, self-efficacy beliefs and employees' recovery over the weekend. After the Zeigarnik experiment, the impact of uncompleted tasks on employees' memory and performance received much research attention. Yet, relatively little is known about the effect of unfinished tasks as a stressor. We hypothesize that the feeling of not having completed and finalized important or urgent work tasks fosters employees' rumination. Specifically, we expect that the feeling of having unfinished tasks adds to the effect of time pressure on employees' recovery, particularly enhancing their perseverative cognitions. We assume unfinished tasks to be an influential stressor as not achieving the week's tasks may be experienced as a failure, be attributed internally to a lack of competence and threaten employees' self-esteem. By building on Semmer et al.'s (2007) concept of 'stress as offence to self' (SOS) we expect that employees' self-esteem mediates the relationship between unfinished tasks and rumination.

In total, 318 research assistants, PhD students and Postdocs filled out online surveys on Friday afternoon before leaving work and on Monday morning. The hypotheses were tested using structural equation modeling. The results indicate that time pressure and unfinished tasks impact rumination on the weekend. Further, our results provide support that unfinished tasks explain unique variance in rumination beyond the influence of time pressure. Moreover, we find that the relationship between unfinished tasks and rumination was mediated by employees' personal self-esteem.

The results emphasize the impact of unfinished tasks as a stressor and highlight that personal self-esteem influences the relationship between unfinished tasks and rumination. From a practical point of view, these findings show the importance of completing urgent and important tasks at the end of the week to recover over the weekend.

Paper 3: The Effect of Vacation on Subjective and Objective Sleep of School Teachers Reporting High and Low Work-Related Rumination

Mark Cropley, Hannah Drewett
University of Surrey, Surrey, UK

Sleep is one of the most important recovery mechanisms available to humans, allowing for recovery from daily strains, and therefore a prerequisite for optimal daily functioning and health. Previous work has demonstrated that workers who experience unwanted, ruminative thoughts and concerns about work-related issues when not at work also report problems with their sleep. Vacations represent an ideal time to detach and recover from work demands, and the purpose of the present study was to investigate the effects of affective work rumination and sleep over the vacation period in school teachers.

Fifty-seven school teachers (Low ruminators $n = 29$; High ruminators $n = 28$) were asked to wear an actigraph accelerometer and complete a sleep diary over 18 nights; including two work weeks separated by a one week half-term vacation. They also completed a measure of Work-related affective rumination at three different time points over the 18 days (before, during and post vacation).

High ruminators remained consistently high in rumination across all three time points, and low ruminators remained consistently low across time. For the objective actigraph measures, sleep efficiency, sleep fragmentation, and assumed sleep time showed only a main effect of time. This was due to all the teachers sleeping more during the vacation, although their sleep efficiency and fragmentation became worse during the vacation. For subjective sleep however, sleep quality improved during the vacation for the high ruminators but diminished on returning to work. Subjective sleep quality for the low ruminators did not change significantly over time.

In conclusion; although the half-term vacation was associated with improved perceived subjective sleep for high ruminators, they nonetheless continued to ruminate about work issues during their vacation. The difference between objective and subjective measures during the vacation week may be due to a change in routine and not having to wake up as early in order to travel to school.

Paper 4: Have Fun! The Role of Pleasure in the Daily Recovery Process

Madelon van Hooff¹, Irene de Pater²

¹*Radboud University Nijmegen, Nijmegen, The Netherlands*, ²*National University of Singapore, Singapore, Singapore*

It has been shown that employees' subjective evaluations of their free time after work are important in explaining their recovery state. However, despite taking a central position in guiding human action, it is still not well understood how pleasure experienced during off-job time affects employee recovery. The purpose of the present study was to shed light on the role of pleasure in the recovery process during free time after work.

We examined 1) how pleasure relates to employees' recovery state at the end of the evening, 2) if these associations exist above and beyond those of experiences that have already been shown to be beneficial for recovery (i.e. detachment, relaxation, control and mastery), 3) if pleasure amplifies the positive associations between these established recovery indicators and employees' recovery state, and 4) if and how employees' recovery state at the end of the workday impinges upon the association between pleasure and their recovery state at the end of the evening.

Serenity and (low) fatigue were included as indicators of recovery. Data was collected by means of a daily diary study comprising two consecutive work weeks (2 measurements daily: at the end of the workday and at the end of the evening) among 84 participants from various occupations and organizations.

Multilevel analyses showed that pleasure experienced during free time after work was related to an improved recovery state (i.e. increased levels of serenity and decreased levels of fatigue) at the end of the evening. Furthermore, for fatigue, but not for serenity, these associations existed above and beyond those of the recovery experiences, including, detachment, relaxation, control and mastery. In addition, the association between detachment and increased serenity (but not lower fatigue) was stronger in the case of high pleasure. Contrary to our expectations, control was especially related to increased serenity (but not to lower fatigue) in the case of low pleasure. Pleasure did not moderate the associations between relaxation and mastery, and between serenity and fatigue. Finally, the relationship between pleasure and serenity at the end of the evening was stronger if employees experienced relatively low levels of serenity at the end of the workday. A similar result for fatigue was lacking.

Altogether, these results underline the importance of pleasure in the recovery process, and hopefully encourage employees to use their free time to engage in pleasant activities.

Paper 5: Recovery among Helicopter Emergency Medical Service (HEMS) Pilots

Mirjam Radstaak¹, Sabine Geurts¹, Debby Beckers¹, Jos Brosschot², Michiel Kompier¹

¹Radboud University Nijmegen, Nijmegen, The Netherlands, ²Leiden University, Leiden, The Netherlands

Shift work has been associated with ill health and a risk of accidents. The adverse effects of shift work can be more pronounced in the presence of additional demanding shift characteristics such as long shifts, night shifts, varying workload and high emotional and cognitive demands. Helicopter Emergency Medical Service (HEMS) pilots work a compressed working week combined with high cognitive and emotional work demands. This study investigated the effects of this shift work type and these work characteristics on recovery and well-being within the population of Dutch HEMS pilots.

Work stressors (i.e. workload and distress during shifts) were measured at the end of each shift and levels of well-being (as indicators of recovery) were examined before, during and after a series of day shifts and a series of night shifts. Results revealed that (i) the start of a series of day shifts was more taxing for well-being than the start of a series of night shifts, (ii) there were no differences in the decrease in well-being during day and night shifts, (iii) distress during shifts was more strongly related to a decrease in well-being during night shifts than during day shifts and (iv) it took HEMS pilots a longer time to recover from night shifts than from day shifts. Night shifts caused the highest burden for HEMS pilots. It is concluded that although this occupational group consists of 'healthy workers', it would not be warranted to start earlier during day shifts, or to have longer series of night shifts.

Symposium title: Work-Family Conflict and Well-Being: Diary and Longitudinal Studies

Laurenz L. Meier², Christoph Nohe¹

¹University of Münster, Münster, Germany, ²University of Fribourg, Fribourg, Switzerland

The growing number of dual-earner families and the increasing demands in terms of flexibility have made the challenge of combining work and family a central topic for both practitioners and academics. Over the last decades, a considerable body of research examined potential antecedents and consequences of incompatibilities between work and family roles (work-family conflict; WFC). Most of these studies focused on work or family stressors as antecedents and job- or strain-related variables as outcomes of WFC, using cross-sectional study designs with single-source self-reports. As a result, various topics have been neglected and limited knowledge exists about the impact on other individuals (e.g. spouse), the effect of positive work characteristics (e.g. resources) and behaviors (e.g. job crafting) on the

intersection between work and family, and more generally, the underlying mechanisms of these relationships (e.g. causal direction). To address some of these gaps, this session presents five studies using diary methods (including event sampling and spouse reports), longitudinal research paradigms, and meta-analytical path analyses of prospective effects.

In the first diary study, Klumb, Siegler, and Vökle examined spillover and crossover processes among couples. They examined whether negative social interactions (e.g. conflicts) at work negatively affect the target's and his/her spouse's well-being. A second diary study among dual-earner couples by Rodríguez-Muñoz and Sanz-Vergel extends Klumb et al.'s findings and examined antecedents and behavioral outcomes of conflicts at work. Specifically, they tested the effect of family-interference-with-work on interpersonal conflicts at work and the effect of work conflicts on conflict behavior with the spouse in the evening.

In contrast to the two previous studies, the diary study of Corts, Demerouti, Bakker, and Boz not only focused on negative spillover effects, but also tested whether job resources (e.g. autonomy) had a positive effect on well-being by increasing individuals' work-life enrichment and flourishing.

Another way to improve the quality of the interplay of the work and family life has been tested in the longitudinal study of Peeters, Demerouti, and van Steenbergen. Using a sample of women who returned to work after pregnancy leave, the authors examined how job crafting can help working mothers finding a new balance between work and family life.

Finally, in their meta-analysis on longitudinal studies, Nohe, Meier, Michel, and Sonntag challenged the common assumption that work-family conflicts influence strain in a unidirectional way and tested reciprocal effects. Taken together, the session fills both empirical and theoretical gaps in the literature on work-family conflict.

Paper 1: How Negative Social Interactions at Work Seep into the Home

Petra L. Klumb¹, Sebastian Siegler¹, Manuel Vökle²

¹University of Fribourg, Fribourg, Switzerland, ²Max Planck Institute for Human Development, Berlin, Germany

In almost all economies the tertiary sector is growing and so is the amount and importance of social interactions at the workplace. The goal of the present study was to investigate the consequences of negative social interactions. Following the spillover-crossover model of Bakker and colleagues (2008; Bakker, Westman, & van Emmerik, 2009) we assumed a two-step process: First, negative social interactions at work lead to increasing distress at the workplace, which will eventually spill over into the private domain and reduce the focal person's well-being. In a next step, stress and strain are transmitted to the focal person's partner via interactions at home.

During a seven-day event-sampling phase with 56 couples, we assessed all interactions at the workplace and at home that were important or had a duration of more than 10 minutes with an adapted version of the Rochester Interaction Record (Reis & Wheeler, 1991). Participants' well-being was assessed using selected adjectives from the Multidimensional Well-being Questionnaire (Steyer, Schwenkmezger, Notz & Eid, 1997).

On average, participants reported about 7 interactions per day which were significant or took more than 10 minutes. Using multilevel structural equation modelling, we found evidence for spillover from workplace to home. In both, men and women, pleasant mood at home was reduced as a function of negative social interactions at the workplace. In contrast to the hypothesis, however, only men showed increased irritation at work and at home as a function of negative work interactions and only women transmitted work calmness into the home. With regard to crossover, we only found men to transmit their mood on their partners at home. The spillover-crossover model was hence supported by our evidence, but only partly.

Paper 2: Daily Conflicts between Work and Home: A Study among Working Couples

Alfredo Rodríguez-Muñoz, Ana I. Sanz-Vergel

¹Complutense University of Madrid, Madrid, Spain, ²University of East Anglia, Norwich, UK

The current diary study among 80 Spanish dual-earner couples examines the relationship between conflicts at work and at home. Using spillover and crossover theory, we examined how daily experiences of family-work conflict predict the conflict at work domain. Furthermore, and following strain-based approach, we also hypothesized that individual's daily work conflicts would spill over to the home domain, increasing their conflicts with the partner. Moreover, we predicted an indirect crossover of family-work conflict experiences to daily conflicts at home. We also examine the moderating role that both neuroticism and exhaustion may play in spillover and crossover processes.

Participants filled in a diary booklet during five consecutive working days (N = 160 participants and N = 800 occasions). Thus, our data set is composed of three levels. Specifically, repeated measurements at the day level consisted the first one (within-person), individual persons the second level (between person), and the dyad the third level (between-dyad). The hypotheses were tested with multilevel analyses, using an actor-partner interdependence model, considering the dyad as the highest unit of analysis, with individuals nested within the dyad.

Results confirmed the effect of FWC on conflicts at work ($t = 5.67$, $p < .001$), and the impact of conflicts at work on conflicts at home ($t = 3.84$, $p < .001$). We also found support for the mediating role of FWC on conflicts at home through conflicts at work ($z = 2.81$, $p < .01$). Further, neuroticism accentuated the relationship between conflicts at work and at home. Thus, daily conflicts at work are positively related to daily conflicts at home; particularly for those with high levels of neuroticism.

These findings indicate that the detrimental consequences of conflicts at work extend beyond the work environment and may affect the family. This is consistent with previous research of displaced aggression, which indicates that aggressive behaviors may be displaced from the original domain to other targets (Hoobler & Brass, 2006). According to the strain-based conflict perspective, strain-based demands may exert a negative influence on work-life balance through mechanisms such as energy depletion (Greenhaus & Beutell, 1985). Consequently, it might be argued that employees under daily work conflict in job-related stress situations, such as interpersonal conflicts with colleagues, might have fewer resources at home, and more irritability.

Paper 3: Work-life Balance and Well-being: A Diary Study using Job Demands-Resources Theory

Inés Corts¹, Evangelia Demerouti², Arnold B. Bakker³, Marina A. Boz⁴

¹University of Seville, Seville, Spain, ²Eindhoven University of Technology, Eindhoven, The Netherlands, ³Erasmus University Rotterdam, Rotterdam, The Netherlands, ⁴Anglia Ruskin University, Chelmsford, UK

Previous research has indicated that work may either interfere with family life, or facilitate family life. In the present diary study, we use Job Demands-Resources (JD-R) theory to investigate how daily changes in work characteristics may influence daily well-being through a spillover process. According to JD-R theory, job demands cost energy and are therefore the drivers of a health impairment process. In contrast, job resources help to reach organizational goals and are therefore the drivers of a motivational process.

Since the boundaries between working life and family life are permeable, we hypothesize that the experiences at work will spill over to the family domain. Specifically, and in line with the health impairment process, we hypothesize that daily job demands (i.e. work pressure and job insecurity) are positively related to daily anxiety because individuals experience more work-life

conflict. In addition, consistent with the motivational process, we hypothesize that daily job resources (i.e. autonomy and supervisor coaching) are positively related to daily flourishing through work-life enrichment. In short, we predict that daily work-life conflict and work-life enrichment represent two independent ways through which work characteristics influence daily context-free well-being.

These hypotheses were examined in a sample of 113 Spanish employees who filled in a daily diary for five consecutive working days. Results of multi-level analysis conducted with MLWin showed that on days that employees experienced higher job demands they also reported more work-life conflict, while on days that they experienced higher job resources they reported less conflict. Consequently, on days that employees experienced more work-life conflict they also reported more anxiety. Moreover, on days that employees experienced more autonomy at work they also reported more work-life enrichment and consequently more flourishing.

These results suggest that the presence of daily job demands and the absence of daily job resources are essential for the experience of daily anxiety. This happens because people seem to experience conflict between their work and their life. On the contrary, the experience of flourishing in life (a positive and active well-being indicator) is particularly stimulated by autonomy at work which generalizes to the non-work domain through the experience of work-life enrichment. Thus, work-to-family conflict and enrichment seem to represent valid transmitters of the impact of work on general well-being on a daily basis. These results expand the JD-R theory by including work-life conflict and enrichment as a relevant mediators in the health impairment process and the motivational process respectively.

Paper 4: How Job Crafting can Help Working Mothers' Transition Back to Work after First Child Birth: An Analysis of the Work-Family Interface across Time

Maria C. W. Peeters¹, Evangelia Demerouti², Elianne van Steenbergen¹

¹*Utrecht University, Utrecht, The Netherlands*, ²*Technical University Eindhoven, Eindhoven, The Netherlands*

For most working women the birth of a child (especially a first child) is a very significant event that has a high impact on both their work and family life. Although the proportion of working women who return to work after their first child birth is large, there are also a substantial number of mothers who choose a priori not to return to work or who exit the labourforce after a short period of time. Apparently, the process of returning to work can be complicated and stressful since one has to adapt to a new situation, both at home and at work.

The goals in this study are to develop a better understanding of the process of returning to work after childbirth and to examine what mothers themselves can do to (re)balance their work and family lives in order to stay healthy and engaged at work. More specifically, we examine the impact of the birth of a first child on the way in which women experience the balance between work and private life and to what extent women themselves adapt their work (job crafting) in order to stay or become healthy and engaged at work. Job crafting means that workers themselves actively change small issues in their work with the goal of improving the fit between work and personal needs, goals and/or competencies.

The sample consists of 162 women who completed a questionnaire before they went on pregnancy leave (T1), and after they returned to work (T2). The sample consists solely of women who gave birth to their first child. We assessed work to family and family to work conflict and enrichment both before and after childbirth, as well as burnout and engagement. Also a number of job crafting strategies were assessed before and after childbirth. Results generally suggest that job crafting can help working mothers in finding a new balance between work and family life when returning to work after their first child birth. Theoretical as well as practical implications for women's' transition back to work will be discussed.

Paper 5: The Chicken or the Egg? A Meta-Analysis of Panel Studies of the Relationship between Work-Family Conflict and Strain

Christoph Nohe¹, Laurenz L. Meier², Karlheinz Sonntag³, Alexandra Michel³

¹University of Münster, Münster, Germany, ²University of Fribourg, Fribourg, Switzerland,

³University of Heidelberg, Heidelberg, Germany

Many employees face the challenge of combining work and family roles which may result in work-family conflict (WFC). WFC can occur in two directions: work can interfere with family (WIF) and family can interfere with work (FIW). Although evidence consistently supports positive correlations between WFC and strain (e.g. exhaustion), the direction of effect is still unclear. Does WFC predict strain, or vice versa? Or are there reciprocal effects, such that WFC and strain predict each other? Most previous studies and existing meta-analyses cannot provide insights into the direction of effect due to their cross-sectional designs. Additionally, there is an ongoing debate about the pattern of relationships of WIF/FIW with domain-specific consequences. The notion that conflict originating in one domain (e.g. WIF) is mainly causing problems in the other domain (e.g. family) has dominated the literature (cross-domain perspective). More recently, scholars have proposed an alternative perspective, assuming that WIF/FIW mainly has an impact on the domain where the conflict originates (e.g. WIF on work-related outcomes; matching-hypothesis). As a result, an enriching controversy has emerged about the primary effect of WIF and FIW on domain-specific consequences.

The aim of the current study was to work toward resolving these controversies. Specifically, using meta-analytic path analyses on 33 studies that had repeatedly measured WIF or FIW and strain, this study provides a test of the direction of effects between WIF/FIW and strain. Additionally, this study sheds some light on the relative merits of the cross-domain versus the matching perspective for the relationships of WIF and FIW with strain.

Results showed reciprocal effects, i.e. that WIF predicted strain ($\beta = .08$) and strain predicted WIF ($\beta = .08$). Similarly, FIW and strain were reciprocally related, such that FIW predicted strain ($\beta = .03$) and strain predicted FIW ($\beta = .05$). These findings held for both men and women and for different time lags between the two measurement waves. Additionally, WIF had a stronger effect on work-specific strain than did FIW, supporting the matching hypothesis rather than the cross-domain perspective. Taken together, the results of the present meta-analysis challenge the traditional views of unidirectional cross-domain effects of WFC on strain. The results show that future models and theories of WFC and strain should take reciprocal and matching relationships into account, thereby providing a more complete picture of how WFC and strain are related to each other.

Symposium title: The Role of Personality Factors in Occupational Well-Being

Anne Mäkikangas, Taru Feldt

University of Jyväskylä, Jyväskylä, Finland

Despite working in the same workplace and sharing the same working conditions, employees' occupational well-being varies considerably as a result of differences in their personalities. However, the role of personality in employee well-being is not yet fully understood. First, the diversity and multitude of personality constructs used in occupational well-being research is striking, and it seems that no consensus exists as to what are the core constructs of personality that really matter in promoting or impairing well-being at work. Second, the previous literature has focused on single personality characteristics, ignoring the employee as a complete person simultaneously possessing many personality characteristics, all of which together may play a role in occupational well-being. This symposium crosses international and scientific borders to share recent, innovative knowledge on personality and occupational well-being. It includes five papers from three countries that use original approaches to the research on personality differences and occupational well-being.

The papers demonstrate the role of personality factors in occupational well-being from different perspectives using different constructs. Papers 1 and 2 will focus on Big Five traits, Paper 3 on workaholism, Paper 4 on overcommitment to work, and Paper 5 on the self-control trait. The studies are based on different methodological approaches using both short-term diary method (Paper 5) and long-term longitudinal studies with several measurement points (Papers 2-4). Additionally, the personality-occupational well-being interaction is approached from the variable- (Papers 1, 3-5) and person-centred (Paper 2) methodological perspectives.

Paper 1: The General Factor of Personality and Occupational Well-being

Dimitri van der Linden

Erasmus University Rotterdam, Rotterdam, The Netherlands

Personality research is guided by several theoretical and empirical models. Well-known examples of such models are the Big Five, Eysenck's Giant Three, the HEXACO model, or the biological-based Reinforcement Sensitivity Theory. These models have also guided much of the previous studies on personality and occupational well-being. Recently however, it has been proposed that in all these personality models, a General Factor of Personality (GFP) exists. The GFP may occupy the apex of the hierarchical structure of personality in a similar way as the general factor g , occupies the hierarchical structure of cognitive ability. The GFP is based on the intercorrelations between personality traits and reflects a continuum of socially desirable behavior. Thus, individuals scoring high on the GFP are assumed to possess a mix of socially desirable traits and to be open-minded, hard-working, sociable, friendly, and emotionally stable with high levels of emotional intelligence. Low-GFP individuals on the other hand, are more likely to have social or personality problems.

Currently the GFP is still a somewhat controversial topic that has led to a lively scientific debate. One explanation for the GFP is that it represents not much more than response bias (e.g. faking) inherent to self-report measures. The other explanation is that the GFP represents a substantive trait with relevant theoretical and practical implications.

In this presentation I will emphasize the potential use of the GFP in research on occupational well-being. For example, it has been shown that individuals scoring high on the GFP, generally also report higher level of self-esteem and well-being. In addition, the GFP may be responsible for a substantial part of the relationship between individual traits such as neuroticism and extraversion on the one hand, and well-being on the other hand. One possible explanation for the role of the GFP in well-being is that high-GFP scores facilitate the ability to deal with other people. In this way, high-GFP individuals may more often reach their social goals (e.g. get a promotion, find a partner) and are more likely to have an adequate social network that may buffer against the effects of stressors. All this will increase their well-being.

Some researchers have even referred to the GFP as a social effectiveness factor. In this talk I will discuss some of the current evidence on the GFP and its relationship to well-being. Furthermore, I will show how the relationships between several individual personality traits and occupational well-being are attenuated after controlling for the GFP.

Paper 2: Occupational Well-being Profiles and Personality: A Person-Centered Approach to 17-year Longitudinal Data

Anne Mäkikangas¹, Johanna Rantanen¹, Arnold Bakker², Marja-Liisa Kinnunen¹, Lea Pulkkinen¹, Katja Kokko¹

¹University of Jyväskylä, Jyväskylä, Finland, ²Erasmus University Rotterdam, Rotterdam, The Netherlands

Occupational well-being has recently been depicted by using a circumplex model of emotions, which has been recently applied in the work context (Bakker & Oerlemans, 2011). This theoretical framework assumes that four different types of occupational well-being - burnout, work engagement, workaholism, and job satisfaction - can be positioned in the two-dimensional space made up by activation and pleasure. However, it is unclear how these four

indicators of work-related well-being combine within individuals, which was the first aim of the study. Another aim of the study was to investigate the personality-related origin of occupational well-being profiles. We examined the relations between intra-individual profiles of the Big Five personality traits extracted over 17 years and different profiles of occupational well-being.

Participants were drawn from the ongoing Jyväskylä Longitudinal Study of Personality and Social Development. Data collected at ages 33, 42 and 50 were used ($n = 183$). The person-oriented inspection with the latent profile analysis indicated four occupational well-being profiles: 1) High energy, very satisfied (30%), 2) High energy, fairly satisfied (54%), 3) Average energy, not satisfied (9%), and 4) Low energy, fairly satisfied (7%). Personality profiles extracted from age 33 to 50 showed a strong interdependency with the occupational well-being profiles. Resilient individuals (low in neuroticism and high in other Big Five traits) typically belonged to the High energy, very satisfied profile, whereas Overcontrolled individuals (high in neuroticism and low in other Big Five traits) were typically in the Low energy, fairly satisfied profile. Overall, the results suggest personality profiles strongly associated with the occupational well-being profiles underlying the importance of the person-job fit.

Paper 3: The Interplay between Workaholism, Work Engagement, and Burnout: A Longitudinal Approach

Ilona van Beek, Toon Taris, Wilmar Schaufeli
Utrecht University, Utrecht, The Netherlands

Workaholism and work engagement are two different types of heavy work investment (Schaufeli, Taris, & Bakker, 2006). More specifically, workaholism can be considered as a 'bad' type of heavy work investment, whereas work engagement can be considered as a 'good' type of heavy work investment. It has been suggested that workaholism may act as a root cause of burnout, because workaholic employees may deplete their mental resources (Porter, 2001). Furthermore, an interview study identified employees who were initially work engaged but had burned-out over time (Schaufeli et al., 2001). Interestingly, this interview study also identified employees who were initially burned-out and became work engaged over time.

To date, solid evidence for such transitions over time is still lacking. Drawing on a two-wave sample ($N = 314$), the present study addresses this issue and examines whether workaholic employees and work engaged employees are vulnerable for burnout over time. Reversed relations are also examined: Can burned-out employees recover and become workaholic or work engaged? In addition, the present study addresses another question: Is it possible for workaholic employees to become work engaged, and vice versa?

Preliminary data analyses suggest that (i) employees who work excessively are at risk to develop burn-out over time, (ii) workaholic employees may become work engaged over time, and (iii) work engaged employees are less likely to become burned-out. The present study is one of the first longitudinal studies on the interplay between workaholism, work engagement, and burn-out, and underlines the importance of examining the associations among these concepts jointly.

Paper 4: Overcommitment to Work: A Stable Personality Factor or a Situation-Related State Modified by Job Factors?

Taru Feldt, Anne Mäkikangas, Katriina Hyvönen, Mari Huhtala
University of Jyväskylä, Jyväskylä, Finland

The major aim of the present study was to investigate the stability of an individual's overcommitment (OVC) to work over a 6-year follow-up time with four measurement points. We further investigated whether OVC predicts efforts and rewards at work or whether the associations are reversed.

According to the Effort-Reward Imbalance model defined by Siegrist et al. (2004), OVC describes a personality pattern that combines the cognitive, emotional and motivational characteristics of an employee in relation to his or her work. In the model, OVC represents a personality feature whereas rewards (e.g. salary), and efforts are situation-related job factors. All these have a major role in an employee's health and well-being: high OVC and perceived imbalance between efforts and rewards are assumed to be risk factors for lowered health.

We expected that OVC is relatively stable over a follow-up period whereas perceived efforts and rewards at work show weaker stability. We further expected that OVC as a personality factor can predict later experiences of effort and reward at work; i.e., overcommitted employees put extra efforts to their work and consequently receive more rewards.

The follow-up study with four measurement points was collected from Finnish managers (N=747). The participants filled the 23-item Effort-Reward Imbalance scale at each measurement point. The results of Structural Equation Modelling indicated that OVC showed relatively high stability over time and that stability increased over measurements showing its highest point between T3 and T4. Perceived efforts and rewards showed weaker stability compared to overcommitment. Some cross-lagged effects were detected from the Structural Equation Modelling analysis and the results will be discussed in the symposium in light of the Effort-Reward Imbalance model.

Paper 5: Incivility Episodes: Examining Duration and Boundary Conditions with an Interaction-Record Diary Study

Laurenz Meier¹, Sven Gross²

¹University of Fribourg, Fribourg, Switzerland, ²University of Bern, Bern, Switzerland

Workplace incivility is on the rise and various scholars proposed that experienced incivility has not only detrimental effects on the target's well-being but that it may also trigger further antisocial behavior. Previous research, however, mainly focused on its relation to well-being and largely neglected its behavioral consequences. For example, the assumption that experienced incivility will be retaliated and may trigger an incivility spiral (Andersson & Pearson, 1999) has hardly been tested despite its theoretical and practical importance. Moreover, the majority of previous field studies focused on chronic conditions of incivility using cross-sectional designs whereas the effects of single episodes of incivility are neglected.

With this in mind, we conducted an interaction-record diary study to examine whether supervisor incivility has a prospective effect on uncivil behavior. We further tested the duration of the effect and whether target's trait (i.e. trait self-control) and state (i.e. exhaustion) self-regulatory capacities moderate this effect. For two weeks, 131 participants reported all interactions with their supervisor. Additionally, trait self-control was measured with a one-time survey and daily exhaustion was measured each morning.

Results showed that experienced incivility predicts instigated incivility in the subsequent interaction and that this effect seems to be rather short-living. Thus, experienced incivility is likely to be reciprocated and hence has negative effects for both interaction partners. Furthermore, in line with the assumption that self-regulatory capacities are required to restrain from retaliatory responses, the effect was stronger when individuals were exhausted. However, in contrast to our assumption, trait self-control had no effect on instigated incivility.

Symposium title: Occupational Health Psychology Applied to Police Forces' Stress Studies

Cristina Queiros^{1,2}

¹*Psychosocial Rehabilitation Lab, Porto, Portugal,* ²*Faculty of Psychology and Educational Sciences - University of Porto, Porto, Portugal*

The comparison of occupational stress among different professions, with data collected between 1988 and 2005 in the UK, reveals that being a police officer was the second most stressful activity (Gonçalves & Neves, 2010; Johnson et al., 2005). Coping with daily job stress can be detrimental to the job performance, the public image of the police (especially in the use of excessive force), and has individual consequences on physical and psychological health (Brown & Campbell, 1994; Hackett & Violanti, 2003). Psychology in general, and occupational health psychology particularly, should be applied to police forces, helping to ameliorate negative consequences of their stressful activity.

This symposium presents 4 different studies conducted with police forces in Europe, and aims to identify negative consequences of occupational stress such as aggressivity, to describe new approaches of daily stress assessments, the development of longitudinally studies about engagement, and the integration of resilience as an approach to mind and body.

Paper 1 (The relationship between burnout and aggressivity among police officers) describes a study that aims to investigate burnout and aggressivity levels among 410 Portuguese police officers, and the reciprocal predictions between burnout and aggressivity.

Paper 2 (Stress and coping among Portuguese police officers: daily diaries study) proposes an innovative research methodology to understand the relationship between stress and coping among police personnel, using an ecological daily diary approach.

Paper 3 (Longitudinal study on engagement levels among Portuguese police officers) describes a longitudinal study comparing work engagement levels among a sample of Portuguese police recruits on training and one year later, as police officers.

Paper 4 (Resilience in the Dutch police force: integrating bodies, minds and spirits) presents a Dutch resilience program developed to help police officers cope with daily stress, studying processes on individual, team and system levels, and considering physical (biological, physiological), mental (psychological) and spiritual dimensions.

Theoretical implications of the symposium draw attention to the consequences of occupational stress among Portuguese and Dutch police officers working in real world policing situations. Furthermore, it presents innovative research methodologies that allow the study of daily and longitudinal stress, while also contributing to the development of efficient coping strategies and resiliency training among this population.

Paper 1: The Relationship between Burnout and Aggressivity among Police Officers

Cristina Queiros^{1,2}, Antonio Leitao da Silva^{2,3}, Mariana Kaiseler^{1,2}, Antonio Marques^{1,4}

¹*Psychosocial Rehabilitation Lab, Porto, Portugal,* ²*Faculty of Psychology and Educational Sciences - University of Porto, Porto, Portugal,* ³*Municipal Police of Porto, Porto, Portugal,*

⁴*School of Allied Health Sciences - Polytechnic of Porto, Porto, Portugal*

The literature shows that policing is a stressful activity where stress can kill more police officers than crime (Ranta & Sud, 2008), and presents police forces as aggressive groups (Rubinstein, 2006). Police officers' burnout becomes a topic of research due to its negative impact on physical and psychological health (Menard & Arter, 2013) and can lead to aggressive behavior toward citizens (Kop & Euwema, 2001; Riddle, 2000; Seron et al., 2004). The relationship between burnout and aggressivity is an important topic of research studied by

several authors (Adams & Buck, 2010; Boyanowsky, 1982; Geller & Toch, 1996; Nieuwenhuys et al., 2012, Queirós et al., 2013), contributing to the discussion about citizens' perceptions about police forces, public image of police forces and occupational health psychology among police forces. The aim of the current study is to understand the relationship between burnout and aggression levels among police officers.

A sample of 410 Portuguese police officers (100% male, mean age=36.1, mean years of experience = 13.0; only 10% have higher graduation, and 76% were married) voluntarily fulfilled the research versions of the Maslach Burnout Inventory - Human Services Survey (Maslach & Jackson, 1997) and the Aggression Questionnaire (Buss & Perry, 1992).

Results show that participants present low levels of burnout (1.6 to exhaustion, 0.9 to cynicism, and 4.8 for personal accomplishment in a scale ranging from 0 to 6), low levels of anger (1.9 in a 1-5 scale) and moderate values of hostility, verbal or physical aggression and aggression (respectively 2.3, 2.7, 2.1 and 2.2). Aggression dimensions were positive correlated with exhaustion and cynicism and negatively correlated with personal accomplishment. Aggression predicted burnout between 13% and 16% while burnout predicted aggression between 13 and 21% (excepting verbal aggression). Burnout seems to be a stronger predictor of aggression, than the opposite. Further attention should be drawn to these findings since burnout appears to have several negative consequences for police officers, including detachment attitudes toward citizens and aggression. Previous findings suggested that during stressful situations people can misinterpret stimuli as threats more frequently, which can elicit aggressive responses (Adams & Buck, 2010; Griffin & Bernard, 2003). Based on our findings, future applied interventions among police officers aiming to reduce aggression, should also contemplate burnout levels, since policing is a stressful activity where aggression must be controlled and the use of excessive force must be prevented (Culver, 2007; Neely & Cleveland, 2012).

Paper 2: Stress and Coping among Portuguese Police Officers: Daily Diaries Study

Susana Rodrigues^{1,2}, Mariana Kaiseler^{1,2}, Cristina Queiros^{1,2}

¹*Psychosocial Rehabilitation Lab, Porto, Portugal*, ²*Faculty of Psychology and Educational Sciences - University of Porto, Porto, Portugal*

Police work is one of society's most stressful occupations (Agolla, 2009). Although stress is an inevitable factor in life, coping plays an important role in modifying stress responses. However, little research has been conducted investigating stress and coping among police officers. Instead, research has focused on chronic and negative effects of stress, and relied largely on retrospective, cross-sectional studies (Anshel, 2000). Additionally, although coping is viewed as an ever-changing response, most research fails to reflect this view. Many studies assess only dispositional coping, or one-time retrospective reports of overall coping with a stressor (Carver & Connor-Smith, 2010). Although this research is important, its ecological validity is limited, failing to address acute daily stress, and the coping strategies used for each stressor. It seems critical to understand the relationship between stress and coping among police personnel as a way to prevent distress, and develop efficient coping interventions (Folkman & Moskowitz, 2004).

Towards this goal, a diary study was conducted among Portuguese Police officers in the city of Porto, aiming to overcome previous limitations. Daily measures of stress and coping were assessed under real world conditions. Eleven police officers aged between 30 and 43 years old (M age = 35; SD = 4, 64) participated in the study and completed a daily diary after each shift, over a period of 10 consecutive days. Each diary entry consisted of two sections: an open-ended stressor boxes asking participants what was their most stressful professional stressor in that day and an open-ended coping question asking what strategies have they used to deal with that stressor. Inductive and deductive content analyses were conducted, in addition to examining the frequency of data obtained from stressors and coping strategies.

Findings indicate that operational stressors such as public disorder situations, vehicle chases, neighborhoods interventions and drug trafficking, were the main reported stressors. The most frequently cited coping strategies were peer support, active coping and avoidance coping. These findings seem to differ from those shown on previous cross sectional coping research, suggesting that problem focused coping strategies are mostly used by these police officers. Hence, these differences may be due to the different research methods used to investigate coping, rather than to actual differences in coping preferences among the population. In sum, the findings of this study highlight the need to dedicate further attention to the investigation of coping among police officers in real world scenarios.

Paper 3: Longitudinal Study on Engagement Levels among Portuguese Police Officers

Mariana Kaiseler^{1,2}, Cristina Queiros^{1,2}, Susana Rodrigues^{1,2}

¹*Psychosocial Rehabilitation Lab, Porto, Portugal*, ²*Faculty of Psychology and Educational Sciences - University of Porto, Porto, Portugal*

The focus of police work (e.g. protection and service) has moved from a reactive position to a variety of proactive response to meet the needs of local communities. As the role of police officers expands from an enforcement approach to a problem solving one, training and curriculum needs must also follow this change assisting police officers in fulfilling their responsibilities, and feel more engaged in their training and jobs. Work engagement is a mental state characterized by high levels of motivation, and has shown to be related with positive work-related outcomes. The aim of the current longitudinal study was to compare work engagement levels among a sample of police recruits on training and one year after, as police officers.

Participants were 278 male Portuguese police recruits aged between 20 to 32 years ($M = 24.11$ years, $SD = 2.37$). Work engagement was assessed with the Portuguese version of the Utrecht Work Engagement scale (UWES). The study was approved by the Ethics Committees of the University, Police Academy School and Security Police. Data was collected in September 2011, and one year later in October 2012. Questionnaires were completed online by the sample of police recruits undergoing academy training, and one year later among the same sample now working as police officers in their first year of duty.

Paired Sample T-tests showed that police recruits undergoing academy training showed lower levels of absorption ($t_{277} = -7.27$; $p < .001$), dedication ($t_{277} = -20.67$; $p < .001$), and vigour ($t_{277} = -21.28$; $p < .001$), compared with one year later when working on duty as police officers. Results show that police recruits undergoing academy training are less engaged than police officers on their first year on duty.

These findings add support to the idea that further attention should be drawn to police academy training and curriculum. Findings may be explained by the strong theoretical basis of Police academy training in Portugal. This is mainly characterized by task-oriented and theoretical training provided in the academy. Hence, when faced with real world tasks, and problem solving scenarios, police officers are likely to feel more engaged with their work. In line with previous research, this study highlights the need to adjust academy training to meet police officers' needs, and overall well-being.

Paper 4: Resilience in the Dutch Police Force: Integrating Bodies, Minds and Spirits

Annika Smit^{1,2}

¹*National Police Programme on Resilience, Apeldoorn, The Netherlands*, ²*Police Academy of the Netherlands, Apeldoorn, The Netherlands*

Research in 2009 and 2010 showed that Dutch police officers were facing a tough job. Police officers reported stress and argued that they sometimes did not use the force needed to get grip on a situation, due to several circumstances. The Ministry of Safety and Justice, the

Police Organization and the Police Association decided to act on this. They launched a national programme on Police Resilience. In addition to national interventions, a research agenda was initiated to explore this topic - as much as was still unknown. How resilient is the Dutch police force? How resilient does a police officer need to be? What are the dominant burdens, and what are strengthening factors? How resilient are policing teams as a whole? What does resilience actually mean?

Numerous research projects started and results were used to create effective interventions, and to develop an integrated resilience model as a basis for these interventions. Processes were studied on an individual, team and system level. Furthermore, physical (biological, physiological), mental (psychological) and spiritual dimensions were explored. The combined insights of these studies will be presented during the symposium, including practical applications: what works and what does not, in the police setting. The most important conclusions from these studies will be highlighted as a review of the Dutch resilience research projects.

Symposium title: Organizational Health Intervention Research: New Approaches towards Evaluation

Georg F. Bauer^{1,2}, Karina Nielsen³

¹University of Zurich, Zurich, Switzerland, ²ETH Zurich, Zurich, Switzerland, ³University of East Anglia, Norwich, UK

Advancing the field of organizational health intervention research requires a systematic accumulation and sharing of empirical evidence across single studies. This integration of knowledge will be facilitated by the development of common evaluation frameworks, of standardized process evaluation instruments and of sharing methodological approaches. Thus, the symposium will present several current developments that all build on involving diverse perspectives in organizations and that could serve to generate a common ground for future evaluations of organizational health interventions.

- The first paper presents an evaluation model for organizational health interventions. Based on a broad literature review of evaluation research in related fields, the paper clearly defines the core dimensions of context, process and outcomes to be considered in organizational health evaluation research, describes how they are related to each other and proposes sub-categories useful for their evaluation.
- The second paper presents an alternative research-based framework for process and effect evaluation of organizational interventions. Building on training evaluation models, process organization theory and realistic evaluation, it shows how to document the intervention itself and how to analyse several, sequential levels on which change can be observed, including changes in occupational health practices.
- The third paper introduces outcome expectations as a process indicator, which can be potentially useful in diverse organizational health interventions. Based on an empirical, large-scale stress-management intervention study, the paper shows that outcome expectations immediately after course participation are related to the independently assessed, retrospective impact assessment of the intervention 18 months later.
- The fourth paper examines which factors drive managers as key change agents to adopt management practices that can reduce employee exposure to psychosocial risks. An exploratory, mixed methods evaluation revealed psychosocial safety climate, readiness for change and managers' own exposure to psychosocial risks as related process factors to be considered in future studies.
- The fifth paper introduces alignment – the integration of occupational health with organizational strategies and processes – as a promising process factor for designing and

evaluating organizational health interventions. This involves for example the need to balance the local adaptations of interventions and the assurance of program adherence. Based on these individual contributions, we will have an integrative discussion with the audience about the potential of these approaches for advancing organizational health intervention research.

Paper 1: Evaluation Model for Organizational Health Interventions: Defining and Relating the Core Concepts of Context, Process and Outcomes

Georg F. Bauer^{1,2}, Gregor J. Jenny^{1,2}, Annemarie Fridrich²

¹University of Zurich, Zurich, Switzerland, ²ETH Zurich, Zurich, Switzerland

Background & procedure: Organizational health interventions usually consist of different intervention elements that are arranged based on an intervention's architecture. As such, complex change processes in the complex social system of organizations will produce unpredictable results, a thorough evaluation is needed. Also, research has shown that the way interventions are implemented and how they are appraised will affect their effectiveness and thus helps explain ambiguous results of interventions. However, currently, diverse evaluation frameworks exist, making it difficult to develop a systematic evidence-base in organizational health intervention research. Thus, based on a comprehensive literature review of the fields of (occupational) health psychology, public health and (worksite) health promotion, the paper presents a comprehensive, generic evaluation model for organizational health interventions that is feasible for both researchers and practitioners.

Model overview: Primarily, the evaluation model builds on clear definitions of context, process and outcome as the core evaluation categories and of their relationships. Context is the overarching frame within which an organizational health intervention is implemented, change occurs and outcomes emerge. Process is clearly differentiated into two sub-categories. The implementation process is defined as the time-limited, actual enactment of all steps and elements of the original intervention plan. The change process is defined as all intended and unintended, observable and non-observable mechanisms of alteration in the intervention context triggered by the implementation – on the levels of the organization, of its members and of its environment. This leads to outcomes, defined as all results of the change process observable and measurable in the intervention context. According to the phase of the change process, alterations of proximate outcomes (e.g. improved knowledge or attitude), intermediate outcome (e.g. improved communication or leadership behavior) and long-term outcomes (e.g. health or productivity) can be distinguished.

Conclusion: The model offers a parsimonious, well-defined set of categories for evaluating organizational health interventions. Its usability has been successfully tested in our own evaluation studies and needs to be further tested by other researchers.

Paper 2: Evaluating Organizational Interventions: A Research-Based Framework for Process and Effect Evaluation

Karina Nielsen¹, Johan Simonsen Abildgaard²

¹University of East Anglia, Norwich, UK, ²University of Copenhagen, Copenhagen, Denmark

Ideally, organizational-level interventions should improve the working environment and help democratize the workplace (Mikkelsen & Saksvik, 1998), however, recent reviews reveal that such interventions are complex and many factors may influence whether they succeed or not (Nielsen & Randall, 2012, Nielsen & Abildgaard, 2013).

Building on Kirkpatrick's (1994) training evaluation model, process organization theory (Tsoukas & Chia, 2002; Weick 1979; Hernes 2010), and realistic evaluation (Pawson & Tilley, 2006) we propose a framework for evaluating organizational-level interventions.

The first step is to document the intervention itself. It includes the description of which activities were planned at each phase (the most common phases of such interventions are initiation, screening, action planning, action implementation and evaluation, Nielsen, Randall,

Holten & Rial Gonzalez, 2010). It also involves describing the drivers of change, e.g. who makes what happen at each phase and who or what facilitates or hinders the progress from one phase to another.

The next step is to analyze at which level a change can be detected. At the first level, changes in participants' attitudes, values, and knowledge should be identified, e.g. increases in empowerment/self-efficacy (for participatory interventions), changes in the psychological contract and attitudes towards their role in dealing with occupational health issues. At the second level, it should be detected whether participants perceive a change in those working conditions targeted by the intervention. At the third level, changes in employee and organizational health should be examined. This includes measuring engagement, burnout, absenteeism, turnover, and performance. Only through determining impact at the previous levels can it be concluded that changes here are in fact due to the intervention having been implemented according to plan, changed employees' mental models, and their perceptions of their working conditions.

An additional level, often omitted when evaluating change, concerns the changes in occupational health practices. It is important to examine organizational learning, i.e. whether the organization changes its current health management practices and procedures, whether key stakeholders (managers, union representatives, health and safety representatives) fulfil a different role, and whether the strategies for planning and implementing future interventions change. The model proposed here offers valuable information for researchers and practitioners alike as it makes it possible to get a detailed understanding of the impact of an intervention and the processes by which change was brought about.

Paper 3: Outcome Expectations as a Key Process Indicator in Stress-Management Interventions

Annemarie Fridrich¹, Gregor J. Jenny^{1,2}, Georg F. Bauer^{1,2}

¹ETH Zurich, Zurich, Switzerland, ²University of Zurich, Zurich, Switzerland

Background: There already exists a lot of research on the impact and benefit of stress-management interventions at the workplace. And there is also a growing body of research on process and context factors, which may reveal the reasons for success and failure of stress-management interventions. Process evaluation also allows drawing conclusions on what works for whom and why but there is no commonly accepted recommendation on which process indicators are appropriate to cover this information and should therefore be captured in stress-management interventions at the workplace. This contribution aims to explore the appropriateness of outcome expectations of the participants as key process indicators in stress-management interventions at the workplace.

Methods: Data for the analysis is provided by a large stress-management intervention project with eight companies in Switzerland. Outcome expectations of the participants were captured with two items after the stress-management courses: The two items cover the expectations on the individual and organizational level. The retrospective impact assessment of the participants, which also covers an individual and organizational perspective and which was captured at the end of the intervention (around one and half year after the stress-management courses), will be used as an outcome measurement. In order to investigate the validity of the outcome expectations regression analyses with the outcome expectations as predictors and the retrospective impact assessment as dependent variable are conducted. Furthermore self-efficacy and individual readiness for change are included in the analysis as possible moderators.

Results: First results have shown that outcome expectations of the participants after the stress-management courses are significantly associated with their retrospective impact assessment at the end of the intervention. The outcome expectations can explain a considerable but small amount of variance in the retrospective impact assessment. Moderator

analysis is not yet completed but there seems to be a moderation effect of readiness for change on the relationship between outcome expectations and the retrospective impact assessment.

Discussion: Outcome expectations seem to be important process indicators for stress-management interventions at the workplace. Although they explain a significant amount of variance in outcomes, future research has to explore further important process indicators.

Paper 4: What Drives Managers to Adopt Healthy Management Practices? Evaluating Factors Influencing Managers' Adoption of Practices Reducing Employee Exposure to Psychosocial Risks

Marie-Esther Paradis, Caroline Biron, Geneviève Baril-Gingras, Pierre-Sébastien Fournier, Michel Vézina
Laval University, Quebec, Canada

Background: Managers are key players in the implementation of organizational health interventions as they are partly responsible for implementing preventive interventions in teams. While many studies point to the crucial role of managers for the success of such interventions, few studies have evaluated the various factors which might influence managers' adoption of practices to reduce employee exposure to psychosocial risks in the workplace. As managers' practices are known to be an important determinant of the success or failure of organizational health interventions, it is necessary to understand factors influencing them.

Purpose: This study aims to evaluate individual and organizational factors influencing managers' adoption of practices to reduce employee exposure to psychosocial risks at work.

Method: This is an exploratory study using mixed-methods and a longitudinal pre-post design. Managers from three organizations in the municipal sector and the private sector participated in the study. Two-waves of questionnaires were completed by managers (N = 80) over a 3-month period to evaluate factors affecting their management practices with regards to psychosocial risks. A total of 26 individual interviews with managers and key stakeholders were conducted in order to document factors influencing managers' adoption of practices, at each step of the intervention what helps, and what doesn't. These managers subsequently received a half-day of training with examples of concrete actions they could take to decrease employee exposure to psychosocial risks. Three months later, managers were met to discuss factors affecting their capacity to adopt such actions within their team.

Results: Preliminary analyses suggest that psychosocial safety climate and readiness to change and managers' own exposure to psychosocial risks are important determinant. This study brings empirical support to the development of process evaluation models by identifying factors influencing management practices in terms of psychosocial risks and employee well-being.

Paper 5: Alignment – Integrating Occupational Health with Organizational Strategies and Processes

Ulrica von Thiele Schwarz^{1,2}, Henna Hasson^{2,3}
¹*Stockholm University, Stockholm, Sweden*, ²*Karolinska Institutet, Solna, Sweden*, ³*Lund University, Lund, Sweden*

The greatest asset of many organizations is its human resources – the employees and their skills, competencies, engagement and motivation. This has implications for how an organization can create an environment that will contribute to employee health, wellbeing and motivation as well as achieve its business outcomes.

In this presentation, we will introduce the concept of alignment. Alignment can be described as the lining up of different aspects of what is going on in an organization so that they create a

common thread. This cuts across different layers and processes in the organization; thus vertical, horizontal and diagonal alignments will be described. In this, we will draw on theories from work and organizational psychology and behavioral psychology, and our own research. Next, we will use the framework of alignment to illuminate why occupational health interventions need to be integrated with the organization's strategy and systems in order to create sustainable change. Implications of alignment for important change processes such as participatory approaches, intervention fit and the role of management will be illuminated.

Lastly, we will describe the implications of our view of an aligned, healthy organization for designing and evaluating interventions in organizations. This includes for instance use of program theory to guide measurements and use of designs such as natural experiments and adaptive study designs. We also provide a framework for balancing between local adaptations and program adherence in order to achieve fit between intervention and organization while maintaining the intervention's theoretical soundness. The overall aim of the presented approach is to close the gap between occupational health and the organization's strategic goals. Thus, the use of outcome measures that are relevant also to the strategic goals of the company is highlighted. We also argue for changing the roles and responsibilities of researchers and practitioners, and describe how this change can be beneficial to the organization as well as the quality of the research.

Symposium title: Symposium on Job Insecurity – Part 1: Measurement, Antecedents and Moderators

Hans De Witte

WOPP - KU Leuven, Leuven, Belgium

Job Insecurity is an important economic stressor, with detrimental consequences for individuals and organizations. The worsening economic situation in Europe and abroad adds to its relevance. A rather extensive research tradition has developed during the last decades. In this first symposium on job insecurity, scholars from a variety of European countries present some of their recent findings on this topic.

This symposium contains 5 papers on job insecurity. We first discuss the measurement of a form of job insecurity that received less attention from researchers: qualitative job insecurity. The second paper discusses how perceptions of job insecurity are affected by wartime conditions. The main focus of the remaining three papers is on moderators of the job insecurity-outcome relationship. This focus is important, as moderators can (a) help clarify the underlying theoretical processes in the job insecurity – strain relationship, and (b) assist in developing suggestions for practice. The symposium covers data from a large variety of countries (e.g. Italy, Syria, Belgium, Sweden and Spain). Analyses include individual level as well as multi-level analyses.

Papers:

1. The Italian version of the Qualitative Job Insecurity Scale: a multilevel CFA
2. Wartime effects on perceptions of job insecurity in Syria.
3. Exemplification and perceived job insecurity: Associations with self-rated performance and emotional exhaustion.
4. Investigating the association between job insecurity and burnout: the moderating and mediating role of performance-based self-esteem
5. How does employability affect the negative relationship among job insecurity and workers' well-being? A comparison among models of direct, mediated or interaction relationships

Paper 1: The Italian Version of the Qualitative Job Insecurity Scale: A Multilevel CFA

Margherita Pasini¹, Margherita Bondino¹, Hans De Witte²

¹*Department of Philosophy, Pedagogy and Psychology - University of Verona, Verona, Italy,*

²*WOPP - KU Leuven, Leuven, Belgium*

Purpose: In the past decades working life has been subject to dramatic change. In Italy socio-economic crisis forced organizations to engage in various adaptive strategies in order to face lower demands and survive in this depressed economic situation. One of the options is to decrease their costs, often by reducing the number of employees or changing the organization of work in the plants. Although these reorganization strategies differ in many ways, they usually have at least one thing in common: they lead to the workforce being permeated with worries regarding the future.

Qualitative job insecurity is defined as the perceived threat to valued job features, e.g., lower pay, new colleagues, higher workload (Hellgren et al., 1999). In the literature most of the studies focus on Quantitative Job Insecurity and its negative effects for work attitudes and physical/mental health. Little research has been conducted on Qualitative Job Insecurity and its consequences (e.g., De Witte, De Cuyper, Handaja, Sverke, Näswall, & Hellgren, 2010; Handaja & De Witte, 2007). Results thus far seem to suggest that both are problematic for the individual and the organization.

The aim of the present study is to validate an Italian version of the Qualitative Job Insecurity scale proposed by De Witte & De Cuyper. The aim of this study is to conduct a multilevel confirmatory factor analysis (MCFA) to evaluate the factor structure underlying the Qualitative Job Insecurity scale, proposed in the Italian version. A single-factor structure for the 8 item of the scale is proposed.

Design/Methodology: To test the construct validity, Confirmatory Factor Analysis (CFA) and Multilevel Confirmatory Factor Analysis (MCFA) were performed (Muthen, 1994). While CFA at a single level of analysis uses the total variance-covariance matrix of the observed variables, MCFA decomposes the total sample covariance matrix into pooled within-group and between-group covariance matrices and uses these two matrices in the analyses of the factor structure at each level. Data collection involved four Italian manufacturing companies with a total number of 828 blue-collars from 73 work-groups.

Results: Multilevel confirmatory factor analysis (MCFA) replicated the previously reported single-factor structure, on which all items significantly loaded at the within-level, ranging from within .44 to .71. The model showed good fit indexes (RMSEA = .051; CFI = .94; TLI = .92).

Paper 2: Wartime Effects on Perceptions of Job Insecurity in Syria

William Reisel¹, Ali Bassam Mahmoud²

¹*St. John's University, New York, USA,* ²*Faculty of Business - Arab International University (AIU), Damascus, Syria*

The present research was conducted in Syria during the revolutionary conditions facing that nation in the years 2012-2013. We hypothesized that the effects of revolutionary conditions would be strongly and positively associated with increased job insecurity. Since this line of inquiry has no prior precedent, the research is exploratory and contributes to theory development in the subject of employee experience of job insecurity. Our preliminary data from a survey of 129 professionals and skilled workers regarding their perception of job insecurity related to job conditions and threats from the unstable political conditions facing their nation is discussed. The results of this research are novel in that this is the first time, to our knowledge, that data has been collected on the subject of job insecurity during a major revolutionary conflict. Limitations and implications of the research are offered.

Paper 3: Exemplification and Perceived Job Insecurity: Associations with Self-Rated Performance and Emotional Exhaustion

Nele De Cuyper¹, Bert Schreurs², Tinne Vander Elst¹, Elfi Baillien^{1,3}, Hans De Witte¹

¹*WOPP - KU Leuven, Leuven, Belgium*, ²*School of Business and Economics - Maastricht University, Maastricht, The Netherlands*, ³*Human Relations Research Group, Faculty of Economics and Business Management, KU Leuven, Campus Brussels, Brussel, Belgium*

Impression management strategies are typically seen as means to obtain something of value and to achieve success. Little is known about potential side effects for the self, or about impression management aimed at prevention of loss. In response, this study probes the relationship between exemplification (i.e. a form of impression management aimed at acquiring the image of model employee) and both self-rated performance and emotional exhaustion, accounting also for the moderating role of perceived job insecurity. We use the Resource Model of Self-regulation and the Conservation of Resources Theory to propose that the association of exemplification with self-rated performance and emotional exhaustion is more positive among job insecure workers than among job secure workers. Hypotheses were tested in a sample of 603 Peruvian workers from different sectors using Structural Equation Modelling. The pattern of results largely supported our hypotheses. We conclude that exemplification may have unintended side effects when workers feel insecure.

Paper 4: Investigating the Association between Job Insecurity and Burnout: The Moderating and Mediating Role of Performance-Based Self-Esteem

Victoria Blom^{1,2}, Anne Richter^{2,3}, Lennart Hallsten¹, Pia Svedberg¹

¹*Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden*, ²*The Swedish School of Sport and Health Sciences, Stockholm, Sweden*, ³*Department of Psychology, Stockholm University, Stockholm, Sweden*

Despite an overall agreement on the negative effects of job insecurity, more knowledge needs to be generated addressing the mechanisms of why and for whom job insecurity has these negative effects. The present study aims to investigate the mechanisms of job insecurity on burnout by studying the intervening influences of performance-based self-esteem (PBSE), an individual's self-esteem that is contingent on good performance. The participants were 13,185 twins from the Swedish Twin Registry. In order to test two potential mechanisms, PBSE was tested as a moderator as well as a mediator of the relation between job insecurity and burnout. The results showed that job insecurity was significantly associated with burnout. Moreover, PBSE slightly moderated this association; burnout increased more during job insecurity for individuals with high PBSE than for individuals with low PBSE. PBSE also partially mediated the association between job insecurity and burnout, in that experiences of job insecurity to some extent triggered PBSE, which in turn was related to burnout. It is suggested that the rather episodic character of job insecurity and its role-changing consequences contributed to the rather modest moderating and mediating effects of PBSE.

Paper 5: How Does Employability Affect the Negative Relationship among Job Insecurity and Workers' Well-Being? A Comparison among Models of Direct, Mediated or Interaction Relationships

Jose María Peiró, José Ramos, Yolanda Estreder

¹*IDOCAL (Research Institute on Psychology of HR, Organizational development and QWL) - University of Valencia, Valencia, Spain*, ²*IVIE (Valencian Institute of Economics Research), Valencia, Spain*

Several studies report severe negative consequences of job insecurity on worker's well-being. Employability (the employee's capability to maintain their job or to get a new one), contributes to improve the well-being among workers who feel insecure in their jobs. Different studies found a direct effect of employability on job satisfaction, general well-being and career behaviors, as employability offers a sense of internal control that promotes well-being. Considered as a personal resource, employability promotes feelings of being in control of one's career, which in turn relate to well-being.

Other studies have considered employability as a moderator of the relationship between job insecurity and well-being. Employable workers will suffer less when perceiving job insecurity than less employable colleagues, because they have better coping resources. Interaction effects of employability and job insecurity on a variety of outcome variables have been reported by several scholars.

Less research is devoted to the idea that employability can affect well-being through job insecurity. Self-perceived employability means that workers are confident in their attributes (e.g. experience and skills) for retaining their current job or gaining a new one. As a consequence of the labourmarket recognition of these attributes, a reduction in perceived job insecurity might take place. In this view, employability does not reduce the effects of insecurity, but it decreases the perception of job insecurity which in turn affects well-being.

To better understand the role of employability on maintaining worker's well-being, a comparison between the mediated effects of employability on well-being and moderation effects of employability on the job insecurity - well-being relationship is needed. This paper compares mediated and moderated models of the relationships between employability, job insecurity and psychological well-being through SEM analysis. Data from the Spanish Observatory of Youngsters' Transition to Labour Market are used. This included 1230 young workers (16-30 years-old) who entered the labour market in the last 5 years.

Symposium on Job Insecurity – Part 2: Longitudinal evidence and testing theoretical explanations.

Hans De Witte

WOPP - KU Leuven, Leuven, Belgium

Job Insecurity is an important economic stressor, with detrimental consequences for individuals and organizations. The worsening economic situation in Europe and abroad adds to its relevance. As rather extensive research tradition has developed during the last decades. In this second symposium on job insecurity, scholars from a variety of European countries present some of their recent findings on this topic.

This symposium contains 5 papers on job insecurity. Two papers analyse the consequences of job insecurity from a longitudinal perspective, focusing on performance and well-being. The next three papers focus on testing theoretical explanations of the detrimental consequences of job insecurity, such as psychological contract fulfilment, perceived control and notions derived from the Job Demands-Resources model. The symposium covers data from a variety of countries (e.g. Romania, Finland, Belgium and Sweden). In addition to SEM-analyses, some more recent statistical methods are used.

Papers:

1. Qualitative job insecurity and performance: A spiral effect
2. Perceived job insecurity and well-being over time: Polynomial regression and response surface approach
3. Why job insecurity hinders idea generation: An application of the job demands-resources model
4. Kicking the other dog: The indirect relationship between job insecurity and being a workplace bully through psychological contract fulfilment as conditional upon causal attribution to the organization
5. Explaining the cross-lagged relationships of qualitative job insecurity with job strain and psychological withdrawal by perceived control

Paper 1: Qualitative Job Insecurity and Performance: A Spiral Effect

Gabriel Fischmann^{1,2}, Hans De Witte¹, Coralia Sulea², Dragos Iliescu³

¹WOPP - KU Leuven, Leuven, Belgium, ²Department of Psychology, West University of Timisoara, Timisoara, Romania, ³The Psyence Group, D&D Research, Bucharest, Romania

Purpose: This study adds to the understanding of the negative effect that qualitative job insecurity has on employee performance. The stationarity of the relationship, in time, was investigated.

Design/methodology/approach: The hypotheses were examined using structural equation modeling in a heterogeneous sample of 338 Romanian employees. Three waves of data, in six months intervals, were examined.

Findings: Results showed that the negative correlation between qualitative job insecurity and performance is statistically significant and stationary over time. As expected, there seems to be a causal effect from increased job insecurity to lowered in-role performance. Additionally, a smaller but still significant effect was found from lower performance to higher qualitative job insecurity.

Originality/value: There are two valuable findings in this study. First, it seems that there is indeed a cause in lower performance, due to increased qualitative job insecurity. Second, the identified spiral effect would theoretically allow large changes in the investigated variables, in time, even if the changes in each step are small. **Limits:** Being longitudinal in nature, our study only allows us to hint at possible causal relationships between the involved variables.

Paper 2: Perceived Job Insecurity and Well-being over Time: Polynomial Regression and Response Surface Approach

Kaisa Kirves¹, Ulla Kinnunen¹, Saija Mauno¹, Anne Mäkikangas²

¹University of Tampere, Tampere, Finland, ²University of Jyväskylä, Jyväskylä, Finland

Based on psychological contract theory it is suggested that perceived job insecurity is more detrimental for permanent than temporary employees' well-being. Permanent employees expect their employer to provide job security and thus perceived job insecurity as a breach results in impaired well-being. Temporary employees, instead, are assumed to accept job insecurity as a part of their contract. The aim of this study is to investigate, separately among permanent and temporary employees, how stability, increases and decreases of perceived job insecurity over one year are related to general and work-related well-being.

The data were collected with questionnaires in two Finnish universities in 2008 (T1) and in 2009 (T2). Altogether 580 employees had a permanent position and 658 stayed in a temporary position across time. Of the permanent employees, 66% were women, their average age was 50 years and 68% had a university degree. Of the temporary employees, in turn, 69% were women, their average age was 37 years and 82% had a university degree. Polynomial regression and response surface approach enabled the investigation of change in perceived job insecurity from T1 to T2 without using change scores. In contrast, job insecurity at T1 and at T2 served as independent variables in the analyses, and polynomial terms enabled also the investigation of non-linear associations with well-being. The interpretations of the calculated surfaces gave information on two dimensions: 1) how the stability of perceived job insecurity and its level were associated with well-being at T2, and 2) how the degree and direction of the change of perceived job insecurity were related to well-being at T2.

The results showed that, first, among both groups all associations turned out to be linear instead of non-linear. Second, among both groups, respondents reported higher job satisfaction, higher vigour at work, lower job exhaustion and less psychological symptoms at T2 when perceived job insecurity was stable and lower instead of stable and higher. Third,

among temporary employees only, the larger the decrease in perceived job insecurity from T1 to T2 was, the higher the reports on job satisfaction and vigour at work at T2 were.

High job insecurity seems to be most detrimental for well-being both among permanent and temporary employees. This finding is contrary to expectations based on psychological contract theory. It seems that a decrease in perceived job insecurity is important for temporary employees' well-being at work.

Paper 3: Why Job Insecurity Hinders Idea Generation: An Application of the Job Demands-Resources Model

Wendy Niesen, Hans De Witte

WOPP - KU Leuven, Leuven, Belgium

Introduction: Previous research has demonstrated job insecurity, the subjective perceived likelihood of involuntary job loss, to have many detrimental consequences (Cheng & Chan, 2008; Sverke, Hellgren, & Näswall, 2002). Consequently, it may also impact employees' idea generation and idea implementation, which respectively are the introduction and application of new ideas, processes, products or procedures. Together, these behaviours constitute innovative work behaviour (IWB) (West & Farr, 1990). The expected negative relation between job insecurity and both components of IWB may be explained by the job demands-resources model, which categorizes job insecurity as a job demand, an aspect of the job that requires sustained psychological effort (Bakker & Demerouti, 2007). According to this theory, job demands (when termed as a 'hindrance stressor') such as job insecurity exert a negative impact on engagement, while exerting a positive effect on feelings of burnout, which may impact employee functioning, hence their idea generation and idea implementation.

Objectives: This study examines whether feelings of job insecurity affect employees' innovative work behaviour and whether the job demands-resources model may explain this relationship.

Methods: Data for this study were collected among 429 Dutch-speaking Belgian employees. Respondents filled in an online questionnaire in Spring 2013. Hypotheses were tested using hierarchical regression analyses in SPSS.

Results: The results showed a negative indirect path from job insecurity to idea generation, both through increased feeling of burnout and through decreased feeling of engagement. No direct or indirect relationship between job insecurity and idea implementation was found.

Conclusion: Our findings contribute both to job insecurity and IWB research. Concerning job insecurity, these results suggest idea generation to be negatively impacted by job insecurity. The Job Demands-Resources model proves to be a valuable framework for explaining this association. Concerning IWB, this research accentuates the importance of investigating both components of IWB separately as both appear to have different antecedents.

Paper 4: Kicking the other dog: The Indirect Relationship between Job Insecurity and being a Workplace Bully through Psychological Contract Fulfillment as Conditional upon Causal Attribution to the Organization

Yannick Griep¹, Tinne Vander Elst², Elfi Baillien^{3,2}, Hans De Witte²

¹*Departement of Work and Organizational Psychology (WOPs) - Vrije Universiteit Brussel, Brussel, Belgium,* ²*WOPP - KU Leuven, Leuven, Belgium,* ³*Human Relations Research Group, Faculty of Economics and Business Management, KU Leuven, Leuven, Belgium*

Research established job insecurity (i.e. perceived threat of losing the job in the future) as an important work stressor yielding a range of negative consequences for employees' well-being, work-related attitudes and behaviours. This study aims to further the field by focusing on a particular behavioural outcome that has rarely been investigated in view of job insecurity:

being a perpetrator of workplace bullying. Specifically, we introduce and investigate an explanatory mechanism that may link job insecurity to being a workplace bully, namely fulfilment of the psychological contract or 'PC' (i.e. employees' perceptions that the organization is providing what it promised) (test of mediation). Additionally, we hypothesize that the indirect relationship between job insecurity and workplace bullying through PC fulfilment is stronger under the condition of high causal attribution to the organization (test of moderated mediation). Or, whether job insecurity leads to being a bully through (low levels of) PC fulfilment is conditional upon blaming the organization for a possible job loss in the future.

The hypotheses were tested using cross-sectional data from 2012 of a heterogeneous sample of 821 Flemish employees. A simple mediation model and a moderated mediation model were tested by means of Structural Equation Modelling (MPlus 7). Significance tests were based on the bootstrapping method (95% confidence intervals; 10,000 bootstrap samples).

The results of the test of the simple *mediation* model showed that, as expected, job insecurity was negatively related to PC fulfilment, which in turn was negatively associated with being a perpetrator of workplace bullying. Furthermore, PC fulfilment mediated the relationship between job insecurity and being a bully. The results regarding the *moderated mediation* model pointed at a conditional indirect effect: After controlling for causal attribution, we found a non-significant relationship between job insecurity and PC fulfilment, while PC fulfilment was negatively related to being a bully. Most interestingly, job insecurity was indirectly related to workplace bullying via PC fulfilment, only under the condition of high (versus low) levels of causal attribution to the organization. In other words: job insecurity relates to lower levels of PC fulfilment, which in turn is associated with more bullying, only when employees blame the organization for the perceived risk of losing the job. Hence, in times of job insecurity, organizations may benefit from communicating about the antecedents of uncertainty situated outside the organization, in order to prevent it from decreasing PC fulfilment and being a perpetrator of workplace bullying.

Paper 5: Explaining the Cross-lagged Relationships of Qualitative Job Insecurity with Job Strain and Psychological Withdrawal by Perceived Control

Tinne Vander Elst¹, Anne Richter², Magnus Sverke², Katharina Näswall³, Nele De Cuyper¹, Hans De Witte¹

¹WOPP - KU Leuven, Leuven, Belgium, ²Department of Psychology, Stockholm University, Stockholm, Sweden, ³Department of Psychology, University of Canterbury, Canterbury, New Zealand

The aim of this study was to investigate whether situational appraisals of control may account for the relationship between qualitative job insecurity (i.e. insecurity about valued job characteristics) and both job strain (depressive symptoms and upper musculoskeletal complaints) and psychological withdrawal (affective organizational commitment and turnover intentions). This prediction is based on the appraisal theory of Lazarus and Folkman.

Two-wave longitudinal data (with a time lag of approximately 14 months) of 722 Swedish white-collar workers were used to test the hypotheses. The hypotheses were tested following a two-step procedure advanced by Cole and Maxwell (2003). Firstly, the results of cross-lagged structural equation modeling showed that qualitative job insecurity was negatively related to subsequent perceived control. Secondly, perceptions of control over the job situation were associated with decreased depressive symptoms and increased affective organizational commitment one year later. Formal tests pointed at a significant indirect effect of qualitative job insecurity on affective organizational commitment through perceived control.

Finally, no cross-lagged relationships were found between perceived control and the outcomes of upper musculoskeletal complaints and turnover intentions. This study contributes to the search for theoretical explanations of the negative consequences of job insecurity for employees' functioning.

Symposium Title: Management of the Psychosocial Work Environment in the Petroleum Industry

Linn Iren Vestly Bergh, [Eirik Bjerkebak](#)
Statoil ASA, Stavanger, Norway

The petroleum industry has undertaken significant efforts to improve the safety and control hazards related to its overall risk picture over the last decades. These efforts have been evoked by major accidents and serious incidents. In the 1970's and early 1980's technological and safety challenges were the main focus. During this period several serious accidents occurred; the most serious ones being the Alexander Kjelland breakdown (1980) and the loss of the Piper Alpha oil platform, which led to a high focus from both companies and authorities on health, safety and the environment (HSE). This includes the promotion of health as well as the prevention of major accidents.

Psychosocial hazards affect the health and safety of individuals, but also the health of organizations in terms of productivity and stable operations (EU-OSHA, 2007, 2009; Leka & Cox, 2008). They are linked to the experience of work-related stress (Cox & Griffiths, 2005; World Health Organization, 2010) which has been reported to be the second most prevalent work-related health problem, affecting 22% of workers in the European Union (EU-OSHA, 2005; WHO, 2010). In best practice guidance, it is reported that psychosocial risks can affect health, productivity and safety and they should be dealt with in the same logical and systematic way as other health and safety issues (Leka, Cox, & Zwetsloot, 2008). An essential question is how can companies in the petroleum industry with high risk potential adopt international best practice and thereby manage this type of risk in a comprehensive manner as part of their normal business operations. As such, the main aim of this symposium will be to explore ways in which four multinational oil and gas companies manage the psychosocial work environment. Furthermore, this symposium should enable experience transfer and contribute to organizational learning between practitioners and academics within the field of occupational health psychology.

Paper 1: Integrated System for Managing Psychosocial Risk in Statoil: Establishing a Performance Indicator for Psychosocial Risk

[Linn Iren Vestly Bergh](#)
Statoil ASA, Stavanger, Norway

Psychosocial risks in the oil and gas industry can have a significant impact on health and safety outcomes and must be handled in the same manner as other operational risks. A sustainable and comprehensive system for psychosocial risk management should ideally be embedded in organizational operations and processes. One way of integrating psychosocial risk management into a larger process is to link it to an organization's strategy using familiar concepts or techniques.

The purpose of this presentation is to describe how Statoil have used the various elements of the internal management system in order to ensure sufficient integration of management of psychosocial work environment. Over several years psychosocial risk management has been integrated into: governing documentation, training programmes, the performance management system and monitoring system. In this particular example, the business was guided in how to benefit from the abundance of frameworks and research in order to manage the psychosocial work environment. As such, the international frameworks have been adapted into the organizational context and re-interpreted to fit the existing business case. This is in line with recommendations from existing frameworks and standards such as PRIMA-EF, PAS1010 and the WHO's Global Framework for Healthy Workplaces highlighting the importance of fully integrating psychosocial work environment into companies' operations. The presentation also addresses challenges encountered in the process and lessons learnt that can be useful for other organizations and the industry as a whole.

Paper 2: Organizational safety in oil and gas industry in Malaysia: Management commitment in translating policy into practice

AS Nizam Isha¹, Angeli Santos², Stavroula Leka²

¹*Department of Management and Humanities, Universiti Teknologi PETRONAS, Bandar Seri Iskandar, Malaysia,* ²*University of Nottingham, Nottingham, UK*

Introduction: The oil and gas industry has become a rapidly growing industry in Malaysia in recent years and the issues of health and safety have become a priority to the government and stakeholders. This study explored the occupational health and safety (OHS) practices at the organizational level and the role of management to increase OHS in the oil and gas industry.

Method: This study employed mixed method data collection using a questionnaire survey to get the views of the employees about management commitment on safety issues and interviews with key stakeholders working in four oil and gas companies in Malaysia. Questions focused on companies' OHS policy, safety communication strategies, safety monitoring and initiatives to promote health and safety.

Results: The survey showed that the operational workers are aware of safety procedures and support the management commitment in implementing OHS in the organization. Review of the companies' OHS policies found that companies are committed in adapting aspects of their operations in strict compliance with all OHS regulations. The study identified different views between top and middle management on OHS implementation, safety training and safety priorities. On the other hand, management impose a very straight regulation on OHS practices among workers. The study also found that the safety infrastructures are also available in the form of plant health clinics with occupational health doctors and nurses in service and internal fire and emergency teams. Incentive schemes in the form of bonuses and salary increments for achieved targets of accident free hours were also found in some of the companies.

Discussion: The oil and gas industry in Malaysia has been growing rapidly in recent years. The development of this highly hazardous industry largely depends on high health and safety standards setup by stakeholders and by the management of the company. The study has found that the management plays an important role in promoting OHS culture in the organization.

Paper 3: An Intervention Program for Leadership Teams in Managing the Risk of Unbalanced Workload.

Ashild Bakke, Sigurborg Oskarsdottir, Synøve Hallås
Statoil ASA, Stavanger, Norway

A Norwegian Oil Company's Safety and Sustainability goals aim to prevent and reduce the risk of human errors and long term exposure to negative working environment factors and to support quality, steady production, job engagement and a health-promoting workplace.

An intervention program has been developed as a tool for leadership teams to manage the risk of an unbalanced workload for both themselves and their employees. Through theory, reflection and practical exercises leadership teams work on different aspects that influence the balance of workload, job engagement and health. This is done in a minimum of four sessions over a period of time depending on the situation and need. Within the frame, content and progression is tailor-made to fit the needs of each team, in close cooperation between facilitator and customer. The topics that are covered in the program (all in relation to workload) are: relationship between work and health, individual and organizational signs and symptoms, leadership, job engagement, psychosocial working environment factors, communication and culture, work-life balance and conflict management.

The program started with a pilot in January 2011. It has been running since then and roughly 200 leaders have attended. Evaluation feedback from participants is positive and points to more knowledge and awareness which has been a base for specific actions. Going forward the program needs to be further developed with a special focus on the systematic evaluation of the actual effect.

Paper 4: Resilience program in Shell

Teri Lillington

Shell, Stavanger, Norway

Shell's vision is to be the most competitive and innovative energy company in the world. Therefore our company needs employees who are resilient, engaged and empowered. Shell's resilience programme is exciting, because not only does it achieve the aims via participation in the programme, but the actual development and the delivery of the programme also works to engage and empower people.

Shell choose to develop the programme using crowd-sourcing, bottom up and top down approaches, and a flexible innovative delivery model which allows the programme to be delivered anywhere in our global operations. The programme was developed "in-house" using the skills of the health professionals employed via Shell Health, who combined knowledge of psychology and human behaviour with an in-depth knowledge of the business to create a fit-for-purpose programme that would work for our business. New knowledge from the published literature was combined with years of practical knowledge from working in the field of employee health. "Train the trainer sessions" delivered via Shell Health either virtually or face-to-face enable members of teams to become facilitators to deliver the programme. This overcomes the difficulty of delivering a programme to remote locations, in many different languages and across cultures. It also promotes ownership of the programme and development of those who choose to become facilitators.

Measures of the programme include:

- 1) Activity measures such as number of people participating, number of modules delivered, number of countries involved.
- 2) The use of the Dispositional Resilience Survey (DRS15), a validated survey tool which measures individual resilience, and comparing results with "dose" of resilience modules
- 3) Using the Shell People Survey results on engagement to determine if there is a correlation with resilience module uptake. The Shell People survey is conducted annually for all employees of Shell globally and includes measures such as engagement and leadership.
- 4) Review of the impact of resilience on safety.

Results clearly demonstrate the benefit of the resilience programme and the impact it has on business outcomes.

Paper 5: A Risk-based Approach to Managing Psychosocial Risks

Clara Mohl Schack¹, Jean Pierre Gardair²

¹Maersk, Copenhagen, Denmark, ²Total, Paris, France

Psychosocial risks link to the experience of work-related stress, which has been reported to be a prevalent work-related health problem (WHO, 2010). As such, there is strong evidence to indicate an association between exposure to psychosocial risks and an array of consequences at the individual and the organisational level.

Based on this notion there seems to be a need for an industry based approach managing the risks associated with expatriation, which is common in an industry where high technical expertise is needed in for example remote locations. This general recognition has led to and overall identification of a best practice approach across the industry based on a questionnaire study.

Targeting the complexity associated with the risks being represented as an interplay between a specific set of individual, organisational, job specific, cultural/geographical dimensions, a multidimensional approach is suggested.

Based on this notion and the data derived from the questionnaire study a risk based approach has been identified consisting of a set of both intervention and prevention measures representing various tools in order to design a “fit for purpose” approach tailored to the specific risk profile of the company.

The aim of such a program is to manage the risks associated with the expatriation process, to prevent emotional and financial costs for the individual and the company, to ensure a safe rehabilitation process in cases where an intervention is needed and to professionalise the way expatriation is managed within the industry. The specific prevention and intervention methods will be presented as part of laying out the overall risks analysis model.

Symposium Title: ‘Modern work times: Irregular Work Time Arrangements and Work Time Control’

Debby Beckers¹, Michiel Kompier¹, Goran Kecklund²

¹*Behavioural Science Institute, Radboud University Nijmegen, Nijmegen, The Netherlands,*

²*Stress Research Institute, Stockholm University, Stockholm, Sweden*

Work hours play a crucial role in the life, health and well-being of workers. Today, many organizations combine two types of temporal flexibility: company-based work time flexibility (e.g., shift work) and employee-oriented work time flexibility, such as work time control (WTC). WTC can be defined as an employee’s possibilities to control the duration, position and distribution of his/her work time. As work time is becoming increasingly irregular and flexible, its’ associations with work-life balance, health and productivity is of growing interest. Against this background this symposium will discuss five studies on current irregular work time arrangements and WTC, from several European countries.

The first study (paper no. 0331; Finnish Public Sector study) deals with an understudied issue, i.e. exposure assessment. It aims at the development of a method to evaluate different characteristics of work hours in an objective way, based on registered work hours (pay roll) data. It is concluded that this method can be used for an estimation of shift work exposure. The second study (paper no. 0333; Swedish SLOSH study) builds upon the shift work and health association. This longitudinal study is among the first to provide evidence for associations between shift work/night work and ‘objective’ measures of the use of medication for sleep disorders and type-2 diabetes.

The third study (paper no. 0334; Swedish bus drivers) deals with a typical example of employer-based flexibility, i.e. split shifts. These consist of, for example, two -same day- shorter shifts of 4-5 hour duration, with a long break (usually 2-5 hours) in between. The authors examine whether split shifts are related to disturbed and short sleep, and to increased fatigue. They collect objective work time data and the factual exposure of split shifts, as well as self-reports and objective sleep monitoring (actigraphy).

The fourth study (paper no. 0335; Swedish SLOSH study) aims to examine if there is a longitudinal association between changes in WTC and work-home interference. It supports the idea that WTC indeed influences work-home interference. The fifth study (paper no. 0338; Dutch NEA-data) aims to make a fine-grained analysis of WTC and its’ relations with employee well-being by distinguishing between the prevalence of access to, need for, and actual use of WTC.

Paper 1: Development of a Method to Evaluate Characteristics of Working Hours Objectively

Mikko Harma¹, Annina Ropponen¹, Tarja Hakola¹, Sampsa Puttonen¹, Aki Koskinen², Mikael Sallinen¹, Phil Bohle³

¹*Working Hours, Alertness and Professional Traffic Team, Finnish Institute of Occupational Health, Helsinki, Finland,* ²*Statistics and Health Economics Team, Finnish Institute of Occupational Health, Helsinki, Finland,* ³*Work and Health Research Team, University of Sydney, Sydney, Australia*

Epidemiologic evidence on the effects of night and shift work on health has been rather inconsistent. Exposure assessment in epidemiological studies on work hours has mostly been based on self-reported and discontinuous data prone to bias and inaccuracy offering limited possibilities for categorization. The aim of the current study was to develop a method to evaluate the different characteristics of work hours objectively. The method will be used in the Finnish Public Sector study, an on-going prospective study including biannual questionnaires on health for about 40 000 persons since 2008 and wide register data on health of about 250 000 workers.

Objective daily work hours data (used for payroll) from 20 wards of Social Services and Health Department (n=1332, 13% male, 87% female) of a large city were analysed from 2008-2012. The work hours data were retrieved from a shift scheduling programme (Titania®) including both planned and realized work hours and shift preferences. The data were averaged for each year to calculate 26 individual work hours characteristics under the following dimensions: 1. Length of the working hours (6 items), 2. Consecutive working days (3 items), 3. Shift work (4 items), 4. Recovery between shifts (4 items), 5. Social aspects of working hours (3 items), 6. Variability of work hours (3 items), 7. Predictability of work hours and 8. Work-time control.

The frequencies and distributions of the variables were studied to evaluate the statistical properties and possible outliers. The internal consistency of each hypothesized main dimension was assessed with Cronbach's alpha. Stability was studied between subsequent years. No missing data or any significant outliers were observed (no individual value was theoretically impossible). Based on 2011 data, the calculated internal consistencies of most of the work hours main dimensions were low (Cronbach's alfa .23 - .48), except for shift work (.82) and the variability of work hours (.84). Comparison between different years showed high stabilities of most work hours characteristics, correlation coefficients being from .70 to .90 in within-individual comparisons.

The developed method can be used for multidimensional and accurate estimation of shift work exposure. The method itself is reliable but the individual characteristics of work hours should be combined cautiously.

Paper 2: A Prospective Study of the Association between Shiftwork & Prescription Drug Use

Phil Tucker¹, Paula Salo², Jussi Vahtera²

¹*Stress Research Institute, Stockholm University, Stockholm, Sweden,* ²*Finnish Institute of Occupational Health, Turku, Finland*

Shiftwork is associated with an increased prevalence of gastro-intestinal problems, metabolic disorders, cardiovascular disease, muscular-skeletal disorders, mental ill-health and chronic sleep disturbance. Evidence of these associations comes from both self-report measures of health and objective measures such as medical diagnoses. However, there have been no studies to date examining the links between type of work schedule and register data of prescription drug use. We have analysed data from the Swedish Longitudinal Occupational Survey of Health (SLOSH) to prospectively examine associations between shiftwork and the purchase of drugs associated with the health complaints listed above.

Separate analyses were conducted for 'shiftwork' (i.e. schedules that may or may not include night work; N=2506) and for 'night work' (schedules that include night work; N=1116). In each case, the control group comprised respondents reporting themselves as doing 'day work' only. Separate analyses were conducted for drugs related to each of six categories of disease, namely alimentary tract; type-2 diabetes; hypertension; muscular-skeletal pain; metabolic disorders; hypnotics and sedatives; and a combined category of anxiety and depression. Thus a total of 12 analyses were conducted.

The analyses were based on identifying the first incidence of use for each participant i.e. analysis of 'any incident use'. Every analysis included as covariates baseline age, sex, smoking status and educational level. In addition, each analysis controlled for relevant self-reported health status at baseline. Cox proportional hazard regression models were used to compute hazard ratios with 95% CIs.

Shiftworkers were more likely to use hypnotics and sedatives ($p<.05$), but there were no associations between shiftworking and use of any other type of medication. Night workers were more likely to use hypnotics ($p<.05$) and type-2 diabetes medication ($p<.05$), but there were no associations between night work and use of any other type of medication.

This is the first evidence of associations between shift/night work and objective measures of the use of medication for sleep disorders and type-2 diabetes. The absence of significant associations in the other analyses may reflect a lack of statistical power. We will explore this and other issues when presenting results of additional parallel analyses that are to be undertaken on a much larger dataset, the Finnish Public Sector Survey.

Paper 3: Bus Drivers Working Hours and its Effect on Sleep and Fatigue: the Influence of Split Shifts

Goran Kecklund¹, Anna Anund², Carina Fors², Jonas Ihlstrom²

¹*Stress Research Institute, Stockholm University, Stockholm, Sweden*, ²*Swedish National Road and Transport Research Institute, Linköping, Sweden*

Flexible shift work arrangements where staffing is closely matched with production needs has become more common during the last decade. One consequence of employer-based flexibility is that the employee may not always have a full shift but instead work a split shift, i.e. two shorter shifts of 4-5 hours, with a relatively long break (usually 2-5 hours) between the working periods. If the worker lives far from the work place it is not possible to go home during the break. Split shifts may be perceived by the employee as an extended work shift with duration of 12-15 hours. As a consequence split shifts may result in elevated fatigue and work-home interference, which may in turn have a negative impact on stress, recovery and sleep.

There are hardly any studies of split shifts and the aim with this paper is to examine whether split shifts are related to disturbed and short sleep, and increased fatigue. The study group is bus drivers in local transportation. The split shifts are often linked to early starting times and late finishing times, which may increase the negative effects of working two periods on the same day. The study is ongoing and includes three sub-studies.

Study A: 231 drivers responded to a questionnaire. 64% of the participants reported that they had to work split shifts and 36% regarded this as a big problem. The aim of this sub-study is to examine whether split shifts are associated with disturbed and inadequate sleep, as well as severe fatigue. The questionnaire data will be linked to objective work time data and the factual exposure of split shifts.

Study B: Objective sleep using activity monitoring (also called actigraphy) is recorded during two weeks, when the drivers are exposed to split shifts. In addition, the participants will also complete a sleep/wake diary that measures subjective sleep quality, stress and fatigue. The study group involves 60 drivers and the results will be available in the beginning of 2014.

Study C: This sub-study has an experimental design and a group of 16 drivers will be examined during a split shift day with early starting times, as well as during a full 8 hour shift with a normal 30 minute break in the middle of the working period. This sub-study will focus on job-related fatigue measured with physiological methods and objectively-verified sleep.

Paper 4: Change in Work-time Control and Work-Home Interference among Swedish Working Men and Women

Constanze Leineweber, Linda Magnusson Hanson, Goran Kecklund
Stress Research Institute, Stockholm University, Stockholm, Sweden

To meet the increasing requests from employees to be able to combine work and private life, organizations increasingly use employee oriented flexible work time arrangements, such as increased worktime control (WTC). WTC refers to an employee's possibilities to control the duration, position, and distribution of his or her work time. This study aims to examine whether there is an association between changes in WTC and work-home interference, while taking demographic background, work hours, and baseline work-home interference into account.

The study is based on working participants of the Swedish Longitudinal Occupational Survey of Health (SLOSH) study who had completed data on the investigated constructs in the 3rd (2010) and 4th (2012) wave (n=5,133). WTC was measured using a well-established seven-item index. One of the items relates to influence over scheduling and the other six items cover aspects of flexi-time, breaks, short time leave, and vacation.

Four groups of WTC were formed: stable high, stable low, increased or decreased work-time control. Work-home interference was measured by means of a four item measure. Nearly half of the participants experienced low (n=2,509, 49%) and about one third (n=1,785, 35%) experienced high WTC at both time points. Considerable less experienced an increase (n=370, 7%) or decrease (n=469, 9%) in WTC. Based on linear regression analyses it was found that participants who reported stable high WTC ($\beta=-0.15$, $p<.001$) and those who reported an increase in WTC ($\beta=-0.20$, $p<.001$) experienced less work-home interference at Wave 4 compared to those with stable low WTC. Decreases in WTC showed no statistically significant effect. Controlling for demographic factors (sex, age, marital status, education, number of children living at home) and baseline working hours did not alter the results substantially. After additional control for baseline work-home interference, participants with stable high WTC ($\beta=-0.25$, $p<.01$) and those with increased WTC ($\beta=-0.27$, $p<.001$) experienced less work-home interference at Wave 4 compared to those with stable low WTC. Furthermore, those with decreased WTC reported slightly increased work-family conflict at Wave 4 compared to those with stable low WTC ($\beta=0.10$ $p<.01$).

Our results support the idea that WTC is a rather stabile construct which has an important impact on experienced work-home interference.

Paper 5: Worktime Control and Employee Well-being Indicators: An Interplay between Need for-, Access to-, and Use of Worktime Control

Hylco Nijp¹, Debby Beckers¹, Michiel Kompier¹, Seth van den Bossche², Sabine Geurts¹
¹*Behavioural Science Institute, Radboud University Nijmegen, Nijmegen, The Netherlands,*
²*TNO Quality of Life, Hoofddorp, The Netherlands*

As a result of growing flexibility in work times, and the potential benefits for employee well-being and motivation, employees' worktime control (i.e., an employee's autonomy over the duration, position and distribution of his/her work time; WTC) has become a frequently researched topic. Indeed, many studies show benign associations between WTC and various indicators of well-being and motivation. However, little is known about the prevalence of WTC, as well as about employees' actual need for WTC, use of WTC-possibilities when offered, and

whether meaningful subgroups could be identified with respect to these variables. Moreover, WTC need and -use are expected to be important determinants of the exact effects of WTC access on employees. Therefore, our study has two purposes: (1) to describe the prevalence of access to-, need for-, and actual use of WTC within the Dutch workforce, and to examine how these WTC variables are correlated with various demographic- and work-related factors. (2) To examine to what extent the association between WTC access and employee well-being (such as work-nonwork balance, health and job-related outcomes) depends on the interplay between employees' need for WTC and actual utilization of WTC, instead of WTC access alone.

For these purposes, a questionnaire was sent to a representative sample of Dutch workers (effective sample = 1.650 employees). Questions were asked about access to WTC, as well as about need for-, actual use of-, and motives for using or not using WTC. In addition, the questionnaire included items about demographic (e.g., gender, age, family situation) and work factors (e.g., work demands, social support, job type) to characterize subgroups with high versus low WTC access, -need, or -use. Finally, well-being indicators (e.g., work-nonwork balance, fatigue, and affective organizational commitment) were measured to study their association with WTC need, -access and -use.

Results of frequency and correlation analyses will be shown to provide insight in the prevalence of WTC need, -access, and (motives for) -use, and for the identification of subgroups. Analyses of variance are conducted to examine the association between WTC access and employee well-being, and the role of WTC need and use therein. Implications for theory and practice will be discussed.

Symposium title: Individuals in the Organization: How Individual Differences Affect Well-being

Arla Day

Saint Mary's University, Halifax, Canada

Workers' ability to cope with work demands is dependent on their individual differences and unique set of resources. Therefore, understanding how these individual differences are expressed in the workplace and the effect they have on employee well-being is an important consideration. The four papers will focus on different individual differences (e.g., demand-control-resource profiles, motivation for volunteerism, perfectionism, and attachment) with a common theme of how these differences have unique effects on employee well-being.

In the first presentation, the authors examine the Demands-Control-Support (DCS) Theory using a profile-based approach from a person centered perspective. This approach argues that there are naturally occurring groups of individuals that experience different profiles of demands, control, and support (e.g., high demands, low support and control, or high levels of all three). Data from a National Health Survey is examined using latent profile analysis to derive statistically created DCS profiles, which are compared using psychological and behavioural indicators of well-being.

The focus of the second presentation is the psychological benefits of volunteering. Specifically, the authors use a sample of volunteers to see whether the type of motivation that drew them to volunteer (i.e., values, understanding, enhancement, social, protective, career, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic regulation) had differing effects on their psychological well-being and work engagement.

In the third presentation, the authors examine the effects of perfectionism on the success of a job-stress intervention program (i.e., ABLE program). Perfectionism is known to have negative

impacts on clinical treatments, but its impact on healthy populations remains unknown. The authors examine the effects of being low vs. high on perfectionistic concerns both prior to, and after the ABLE program on participants' improvements on well-being (i.e., depression, anxiety, stress, strain, and recovery).

In the final presentation, the authors examine the impact of adult attachment style on burnout and social variables. The two dimensions of adult attachment styles (i.e., anxious and avoidant) have significant impacts on relationships in the workplace. They test the proposed two-factor structure of adult attachment, and look at their differential relationships with the outcome variables. The impacts of these relationships on individual well-being in the workplace will be discussed.

Paper 1: Profiles of Job Demands Control and Support: A Person-Centered Approach to Understanding Work Characteristics and Well-being

Patrick Horsman, Kevin Kelloway
Saint Mary's University, Halifax, Canada

The Demands-Control-Support (DCS) Theory (Karasek, 1979) has served as a foundational approach to understanding characteristics of the work environment and how they impact the individual and the organization. Yet due to the multidimensional nature of DCS there has been considerable debate over its theoretical structure and whether effects of each component are additive or multiplicative or both (Ganster, 1989) and whether there is a true buffering effect or not (van der Doef & Maes, 1999). While there is considerable support for purely additive effects (e.g., Luchman & Gonzalez-Morales, 2013), only a very small proportion of studies have found evidence supporting a 3 way interaction (Hausser, Mojzisch, Niesel, & Schulz-Hardt, 2010).

In essence, we still do not understand how the three components interrelate. However, it is notable that DCS research has been conducted almost entirely from a variable-centered perspective; meaning a variable representing each is used in a model to predict or be predicted by a given number of antecedents or outcomes. However, another approach to understanding a multi-dimensional construct is to adopt a profile based approach from a person centered perspective. Such a perspective would argue that there will be naturally occurring groups of individuals which may experience high demands and low control and support and others which experience high levels of all three, and that each profile is potentially associated with a unique set of outcomes.

Person-centered analysis techniques have been previously used to demonstrate that oft-neglected components of organizational theory hold considerable explanatory power when approached from a different perspective (e.g., Meyer, 2012). Therefore, the present study applies the same principals to DCS theory by adopting a person-centered approach. Data from a National Health Survey was examined via latent profile analysis to derive a number of statistically created DCS Profiles which in turn are compared using psychological and behavioural indicators of well-being. Results of this analysis will be presented along with implications for DCS Theory and a brief discussion on the value of using person-centered approaches in occupational health research.

Paper 2: Volunteer Motivation & Well-being

Aleka MacLellan, Kevin Kelloway
Saint Mary's University, Halifax, Canada

Previous research has consistently outlined the psychological benefits of volunteering (Thoits & Hewitt, 2001). However, researchers have recently suggested that it may not be the volunteer work itself that results in positive outcomes, but rather, the type of motivation that causes individuals to volunteer (Weinstein & Ryan, 2010). Accordingly, there are two

predominant theories of motivation in the volunteer literature: the functional approach (Clary & Snyder, 1991) and self-determination theory (SDT; Deci & Ryan, 1985). The functional approach theorizes that volunteers engage in the same voluntary behaviours to serve different functions (Clary & Snyder, 1999). Specifically, there are six motives explaining why individuals volunteer: to express humanitarian beliefs (i.e., values), to engage in activities that facilitate learning (i.e., understanding), to seek opportunities that aid personal growth (i.e., enhancement), to conform to the norms of significant others (i.e., social), to reduce one's own feelings of guilt (i.e., protective), and/or to advance in the work world (i.e., career). SDT equally maintains that behaviour can be guided by different regulations.

First, individuals may volunteer in order to obtain a reward (i.e., external regulation), and/or due to one's feelings of guilt (i.e., introjected regulation). Such volunteers have controlled motivation. Second, individuals may engage in volunteering because it is meaningful (i.e., identified regulation), aligns with one's values (i.e., integrated regulation), and/or is enjoyable (i.e., intrinsic regulation). These volunteers express autonomous motivation. Using an online survey, the present study examined whether different types of motivation predicted psychological well-being and work engagement among a sample of volunteers.

Results demonstrated that volunteers with values and autonomous motives experienced increased psychological well-being, whereas volunteers with protective, career, and controlled motives experienced decreased psychological well-being. Furthermore, values, understanding, enhancement, social, protective, and autonomous motives predicted increased work engagement among volunteers. These findings highlight that although individuals may perform the same voluntary behaviours for non-profit organizations, their motives for volunteering have differential effects. This study has implications for researchers and practitioners, as it provides evidence for the types of volunteers that experience psychological benefits from volunteer work.

Paper 3: The Problem with trying to be Perfect: How Perfectionistic Concerns Impedes Treatment Outcomes in the ABLE Program

Nikola Hartling, Arla Day, Lori Francis
Saint Mary's University, Halifax, Canada

Objectives: In the workplace perfectionism is considered a sought after trait. Yet the research is consistent in linking perfectionistic concerns to a number of negative outcomes such as stress, depression, anxiety (e.g., Hewitt & Flett, 1993), and recovery (Flaxman et al., 2012). In addition to the negative relationship between perfectionism and well-being measures, perfectionistic concerns have also been found to have significant negative impacts on treatment success in clinical settings (e.g., Blatt et al., 1998), and has been hypothesized as impeding well-being outcomes in interventions targeting working adults (Stevens, 2010). Yet, despite the workplace being cited as a domain effected by perfectionism (Stanley & Ashby, 1996), research looking at its effects in the workplace are limited (e.g., Flaxman et al., 2012), and there are no quantitative studies looking at the how perfectionism impacts workplace intervention programs. Therefore, we compared the effects of high and low levels of perfectionistic concerns both prior to, and after a job stress intervention program on a variety of well-being outcomes.

Methods: Participants were recruited to take part in an intervention program (the ABLE program). The ABLE program is aimed at improving employee well-being through an individually tailored coaching program that focusing on goal setting and improved coping skills. Participants completed measures of perfectionistic concerns as well depression, anxiety, and stress, strain, and recovery at four time points over a 12-month period.

Results: In order to examine the effects of high versus low levels of perfectionistic concerns, a median split was done of perfectionistic concerns scores both prior to and after the ABLE

intervention. The data was also collapsed across intervention group, resulting in three time points (pre-ABLE, post-ABLE, and maintenance). Three (time) x 2 (perfectionistic concerns) MANOVAs were conducted on the dependent measures for high and low perfectionistic concerns levels prior to and after the intervention. Significant multivariate effects were found for depression, anxiety, stress, and recovery for perfectionism levels prior to ABLE. Significant multivariate effects were found for all dependent measures after ABLE, where high levels of perfectionistic concerns were related with less improvement on well-being measures throughout the ABLE program.

Implications: The current research extends past research by showing how perfectionistic concerns impacts intervention programs. It also highlights the need to consider the consequences of perfectionism in the workplace, and addressing it in interventions.

Paper 4: Attachment in the Organization: Implications for Incivility and Burnout

Michael Leiter¹, Arla Day², Lisa Price¹

¹*Acadia University, Wolfville, Canada*, ²*Saint Mary's University, Halifax, Canada*

Attachment theory proposes that people maintain perspectives on social relationships along two dimensions: anxiety and avoidance. Although the roots of attachment styles originate in early childhood, they pertain to adult relationships, including relationships at work. Initial applications of attachment theory to worklife have been promising, indicating the secure attachment styles are associated with more fulfilling experiences. A factor analysis on the 10 Brief Attachment Questionnaire items indicated two clear components labeled as anxiety and avoidance. Assigned loadings were greater than .56; cross-loadings were .23 or less, supporting Hypothesis 1: The anxiety and avoidance dimensions of adult attachment styles will factor into two orthogonal components. The three aspects of burnout had fairly equal correlations with anxiety ($r=.20$ to $.24$). However, avoidance was significantly and negatively correlated only with efficacy ($r=-0.12$). Overall, anxiety was more strongly correlated with burnout and social variables than was avoidance. With the exception of the correlations involving subordinate incivility and workgroup civility, the correlations between anxiety and the outcomes were greater than were the respective correlations between avoidance and the outcomes. These results provide partial support for Hypothesis 2 that anxiety will be more highly associated with incivility than will avoidance, and avoidance will be more highly associated with burnout than will anxiety.

Attachment dimensions (anxiety and avoidance) made distinct contributions to predicting burnout and social variables. Anxiety contributed to predicting all nine variables. Avoidance explained additional variance beyond the contribution of anxiety for most variables. These analyses provide partial support for Hypothesis 3: The anxiety and avoidance dimensions will each make a distinct contribution to explaining variance in incivility, civility, and job burnout.

Symposium title: Investigating Psychological Well-Being after Occupational Hazardous Substance Exposure: A Multidisciplinary Perspective

Jessica Lang

RWTH Aachen University, Institute for Occupational Medicine, Aachen, Germany

Dealing with hazardous substances at work is an often required demand for specific occupations. Occupational hazardous substance exposure poses a severe threat to employees not only with respect to known adverse effects on the organism but also with respect to employees' mental well-being. Exposure to hazardous substances in general (e.g., Crighton, et al., 2003) and polychlorinated biphenyls (PCBs) in particular (e.g., Seegal, et al., 2013) have been linked to psychological ill-health and are therefore a relevant topic for occupational health psychologist.

The present symposium aims at demonstrating a multidisciplinary approach to understand the association of PCBs as a hazardous substance and its effect on psychological well-being. The background of the respective papers presented in this symposium is a medical surveillance program initiated for affected workers who have been exposed to PCBs and are screened on a yearly basis for potential adverse (psychological) health outcomes by a multidisciplinary team of physicians, psychologists and a health economist.

The first two papers are taking on the psychological perspective and are applying a theoretical approach into the workplace setting based on terror management theory (TMT; Greenberg, Pyszczynski, & Solomon, 1989). Paper 1 focuses on the participants' health protection behaviour and how individuals are dealing with their knowledge of the hazardous substance exposure with either avoidant or active coping styles. Paper 2 extends the Terror-Management-Health-Model (TMHM; Goldenberg & Arndt 2008) by including the actual mental health condition as the final outcome measure resulting from the perceived health threat. Thus Paper 2 aims at increasing the knowledge on the actual processes that lie between the exposure and the individual mental health state.

The third paper takes on a medical perspective and considers a relevant characteristic of PCBs for their impact of mental health besides the actual perceived health threat. Specifically, PCBs are known to impact the neurotransmitter systems, especially those associated with mental well-being. Therefore, Paper 3 adds knowledge to potential organic effects of hazardous substances on psychological health outcomes.

Finally, the fourth paper takes on a health economic perspective and applies quality adjusted life years as an evaluation tool of the medical surveillance program by simultaneously following the development of exposure specific health related quality of life over the time course of the study.

Paper 1: Health Protection in the Context of Terror Management: A Moderated Mediation Approach Considering Health Efficacy Beliefs after Occupational Hazardous Substance Exposure

Jessica Lang, Petra Gaum, Thomas Kraus

RWTH Aachen University, Institute for Occupational Medicine, Aachen, Germany

Hazardous substance exposure at work increases the risk for specific illnesses and potentially reduces individual life expectancy. According to Terror-Management Theory (TMT; Greenberg, Pyszczynski, & Solomon, 1989) experienced health threats are linked to increased mortality salience, which elicits proximal defence strategies to remove these aversive death-related thoughts from our consciousness. Considering protection motivation theory (Rogers, 1983), whether individuals initiate adaptive or maladaptive strategies depends on how individuals perceive their efficacy in dealing with the respective threat. The purpose of the present study was therefore to apply TMT to a workplace setting and testing a longitudinal moderated mediation model as proposed by Goldenberg and Arndt (2008) in their Terror-Management-Health-Model (TMHM).

Workers (N = 136) participating in a surveillance program were surveyed regarding their perceived health threat and perceived health efficacy concerning their exposure at baseline. Mortality salience and their proximal defences (i.e. active and avoidant coping strategies) were assessed after one year all with validated measures. The mediated moderation model was conducted according to the procedure described in Preacher, Rucker, and Hayes, 2007).

Results indicated that the initially perceived health threat positively influenced mortality salience after one year (B = 0.67, $p < .001$). Results regarding the conditional indirect effect revealed that the indirect effect of health threat on cognitive coping behaviour through mortality

salience was only significant when participants perceived some form of efficacy in dealing with potential adverse health effects due to their hazardous substance exposure (e.g., $B = 0.20$, $SE = 0.08$, 95% $CI = 0.07$ to 0.35) but not when participants had no health efficacy beliefs ($B = -0.01$, $SE = 0.05$, 95% $CI = -0.11$ to 0.09). Interestingly, similar results were found for the avoidant coping strategy.

Although contradictory at a first glance, findings indicate that according to parallel processing frameworks (e.g., Witte, 1998), participants' motivation to reduce health threats can simultaneously elicit active adaptive response that can rationally protect their health as well as maladaptive avoidant responses that deal with the aversive emotions that come along with the experienced health threat. These effects only occur as long as participants perceive some form of efficacy over their threatening situation. Future research should try to understand which strategy is pursued or dominates on the long run (e.g., by looking at dropout rates).

Paper 2: Extending and Applying the Terror Management Health Model: Towards a Comprehensive Model of Occupational Hazardous Substance Exposure and Mental Health

Petra Gaum, Thomas Kraus, Jessica Lang

RWTH Aachen University, Institute for Occupational Medicine, Aachen, Germany

The Terror Management Health Model (TMHM; Goldenberg & Arndt 2008) describes how perceived health threats can affect individual coping behaviour in dealing with a health threat. The present study aims at extending the TMHM focus by adding long term mental health outcomes to the model and applying it to a workplace setting. For most people, physical health is associated with long life. Therefore health threat is closely related to mortality and is a stressful experience for many people. When applying the model to an occupational context the exposure to hazardous substances is one potential health risk factor. A connection between hazardous substance exposure and the development of mental disorders has often been described in previous research (e.g., Seegal et al., 2013). To our knowledge, there exists no comprehensive model which represents the underlying psychological processes in more detail. In this work we want to introduce a "comprehensive model of occupational hazardous substance exposure and mental health".

This model is intended to explain the psychological mechanisms after an occupational hazardous substances exposure and to give clearer insights in the development of mental disorders after such risk communications. The basis of this sees that terror management and stress theories are used and linked together. Hazardous substances are chemicals which constitute a danger to health. It is supposed that a hazardous substance exposure leads to a health threat which according to TMHM activates mortality salience (MS). Humans are motivated to reduce MS by applying adaptive or maladaptive coping strategies. Effective coping mechanisms are able to buffer the negative effect from mortality salience on mental health. If coping strategies are maladaptive or do not work, mental disorders may occur.

Initial empirical results support our model. We found a significant relationship between MS and mental illness (e.g., depressive symptoms: $\beta=.393$; $p<.001$). There was also a significant association of MS with coping (e.g., problem-focused coping: $\beta=.477$; $p<.001$). Further, we found that coping mediates the effect from MS to mental illness (e.g., problem-focused coping: Sobel $z = 2.14$; $p = .032$).

While the TMHM focuses and explains how people cope after health threat, our focus was to explain why people develop more mental illness after health threat, like hazardous substance exposure. We want to present a theoretical model and support our model with initial empirical data.

Paper 3: The Impact of Physiological Mechanisms in the Development of Mental Syndromes after Occupational Exposure to Hazardous Substances

Franziska Putschögl, Petra Gaum, Thomas Schettgen, Monika Gube, Thomas Kraus, Jessica Lang

RWTH Aachen University, Institute for Occupational Medicine, Aachen, Germany

Background: Polychlorinated biphenyls (PCB) are chemical compounds which were often used for industrial purposes and are known to induce severe health effects. Additionally, previous studies documented that the exposure to environmental and occupational hazardous substances, such as PCB, has an impact on mental health (e.g., Kilburn, Warsaw & Shields, 1989). Particularly occupational exposure to PCB has been associated with higher prevalence rates of mental syndromes (Gaum et al., in prep.). In general, various physiological mechanisms play a role in the development of mental disorders. Changes in the neurotransmitter systems – especially in the neurotransmitters dopamine, serotonin and norepinephrine – have been reported (e.g., Krishnan & Nestler, 2008; Nutt, 2008).

Regarding PCB effects, previous studies have mainly focused on in-utero and neurodevelopmental exposure in animals or humans (e.g., Faroon et al., 2000). However, there is only limited evidence for PCB induced changes in the neurotransmitter system in adults.

Therefore our study focuses on the association between PCB body burden and urinary metabolites of the three mentioned neurotransmitter in workers with elevated PCB exposure. Specifically, we want to examine the effect of the metabolites homovanillic acid (HVA for dopamine), 5-hydroxyindolic acetic acid (5-HIAA for serotonin) and vanillylmandelic acid (VMA for norepinephrine) on the development of mental syndromes.

Method: Within a medical surveillance program called HELPCb (Health Effects in High-Level Exposure to PCB) that monitors possible adverse health effects of occupational PCB exposure, urine samples were obtained from 110 subjects over three consecutive years. The urinary concentrations of the metabolites HVA, 5-HIAA and VMA were analysed and expressed per milligram of creatinine. Blood samples were obtained by vena puncture in order to determine the internal exposure to PCB. Mental syndromes were assessed with the German version of the Patient Health Questionnaire (PHQ-D, Loewe et al., 2002).

Results: PCB had an impact on the metabolites of serotonin (e.g. 5-HIAA/Cr: $\beta = .526$; $p = .000$) and dopamine (e.g. VMA/Cr: $\beta = -.280$; $p = .003$). Further results indicate that the metabolites function as moderators on the effects of PCB on depressive syndromes (e.g. $\beta = .565$; $p = .001$) as well as on anxiety syndromes (e.g. $\beta = .473$; $p = .011$).

Discussion: Findings indicate that in fact there is a physiological mechanism that influences the development of mental syndromes after an occupational hazardous substance exposure to PCB.

Paper 4: Longitudinal Effects of Occupational PCB Exposure on Quality Adjusted Life Years (QALY)

André Esser, Monika Gube, Thomas Schettgen, Thomas Kraus, Jessica Lang
RWTH Aachen University, Institute of Occupational Medicine, Aachen, Germany

Quality adjusted life years (QALYs), based on health related quality of life (HRQL), are a commonly used concept in health economics. HRQL is considered to measure the subjectively felt quality of life in relation to the currently perceived state of individual health. Furthermore, it is regarded as a multidimensional construct, which comprises “the physical, emotional, mental, social, spiritual, and behavioural components of well-being and functioning from an individual’s perspective” (Schumacher, Klaiberg et al. 2003). Therefore the concept comprises

OHP relevant outcomes. The components of individual HRQL ratings are combined into an index value, which integrates the community preferences in relation to the respective individual health state. The HRQL index value along with the remaining lifetime of the person results in QALYs. QALYs are frequently used to evaluate medical interventions. The aim of the present study was to apply QALYs to evaluate a surveillance program and measure the impact of occupational PCB exposure on the remaining QALYs of participants.

HRQL was assessed with the European Quality of Life Questionnaire (Rabin, Oemar et al. 2011). After three cross sectional examinations at intervals of one year the longitudinal development of QALYs was compared by repeated measures ANOVA. The sample was split at the 95th percentile of a reference group for different PCB-congeners. As potential confounders age and educational status were treated as covariates.

A significant difference in height and development of QALY over time was only shown for the high-chlorinated PCB congeners (HPCB) 138, 153, 180 and their summation. The between group effect was found on PCB 153, 180 and the sum of HPCB ($f=4.488 - 7.060$, $p=0.009 - 0.036$, $\eta^2 = 0.038 - 0.058$). It could be shown, that QALYs decreased in the higher exposed group and QALYs recovered after year two and increased at year three in the lower exposed group ($f=4.282-4.523$, $p=0.012-0.015$, $\eta^2=0.036-0.038$). Also the higher exposed group showed the highest mean difference between year one and three (1.668 QALY ($p=0.017$)) at PCB 180. Taking the dimensions of the EQ-5D into account, the between group effect seems to be based mostly on the dimension activity. The development of the inner subject effect however seems to be based on the dimension activity.

Findings indicate that HPCBs have a relevant influence on the development of QALYs. At the same time, QALYs seem to be a useful evaluation tool for the medical surveillance programme since they indicate participants' personal benefit.

Symposium title: Status Quo and Issues of Burnout Studies in Korea with Samples for Students, Counsellors and Soldiers.

Hyunju Choi¹, Eunbi Chang¹, Min Hee Cho¹, Jayoung Lee², San Min Lee¹

¹Korea University, Seoul, Republic of Korea, ²Seoul Cyber University, Seoul, Republic of Korea

After the 'Korean War' in 1950s, South Korea has achieved one of the fastest economic advances, the so called 'Miracle of Han River'. This rapid economic advance has caused some side effects such as severe competition. Last year, the Korean Herald reported that one in six Koreans has experienced mental illness. Modern society's hectic schedule, fierce competition, economic difficulties and pressure in work place may be the reasons for the soaring figures. For these reasons, we have investigated burnout syndrome in various fields such as students, counsellors and soldiers. Burnout is a psychological syndrome that arises in response to chronic stressors on professional workers (Maslach, Schaufeli, & Leiter, 2001), which consists of emotional exhaustion, cynicism, and academic inefficacy (Shin et al., 2011).

In this symposium, a panel of experienced presenters aims to identify and assess the protective and risk factors of burnout symptoms (e.g., academic achievement pressure, academic control, academic self-efficacy, social support and coping strategies) on the development of burnout.

Each study has applied state-of-the-art statistical methodology (e.g., Latent Profile Analysis, Latent Transition Analysis, Multinomial Logistic Regression and Structural Equation Modelling) to analyze the data. Finally, each presenter will give invaluable insights to the audience on the prevention of burnout syndrome.

Paper 1: Longitudinal Model of Academic Burnout among Korean Middle School Students Applying Latent Profile Analysis

Eunbi Chang, Hyunju Choi, Sang Min Lee
Korea University, Seoul, Republic of Korea

Academic burnout is a psychological syndrome of emotional exhaustion, cynicism and academic inefficacy which develops as students continuously fail to successfully cope to academic demands (Lee et al., 2007; Yu, Lee, & Nesbit, 2008). For decades, several studies have been trying to unearth the developmental processes of burnout and burnout profiles (Taris et al., 2005; Lee et al., 2010; Noh et al., 2012). Recently, it was also reported that levels of sub-factors of burnout changed across time points (Lee, 2010; Parker & Salmela-Aro, 2011). Based on this rationale, this study aims to examine the changes in burnout profiles using longitudinal designs.

To address this issue in a systematic fashion, we followed a three step strategy. First, standardized residuals using burnout scores at time 1 and time 2 were estimated to yield the academic burnout changes. Second, models from latent profile analysis (LPA) are fitted in order to detect typologies of academic burnout changes. Third, multinomial logistic regression was conducted to identify the effects of covariate variables associated with changes of burnout typology over time. The analysis yielded four burnout profiles based on degree: distressed, maintained, persevered and well-functioned.

Result indicated that the critical factor to determine the distressed group and maintained group was academic self-efficacy. And the critical factor to determine the maintained group and well-functioned group was sense of control. Together these findings can help professionals better understand the students' long-term experiences of academic burnout among Korean middle school students and help to design an intervention program according to the profile of burnout changes.

Paper 2: Differentiated Interaction Effects depending on the Level of Counsellor Burnout

Hyunju Choi, San Min Lee
Korea University, Seoul, Republic of Korea

Because counsellors need to focus on being compassionate and empathic to clients' distressing stories, counsellors who work with traumatized clients are at greater risk for developing vicarious or secondary traumatic stress symptoms (Burke, P. A., Carruth, B., & Prichard, D., 2006). According to Choi et al. (in press), counsellors with traumatized or bereaved clients were more likely to be affected by internal resources (counter-transference management ability) whereas counsellors of personal growth issues clients were more likely affected by external resources (environmental resources). The present study aims to detect the interaction effects (type of resources and the type of clients) on counsellor's burnout level (low, medium, and high).

The results indicated that compared to counsellor groups with low levels of burnout, both medium and high burnout groups had an interaction effect between internal resources (counter-transference management ability) and type of clients, and between external resources (environmental resources) and type of clients. However, compared to medium level burnout group, the high burnout group had no interaction effects (type of resources and the type of clients).

This result suggested that an interaction effects between resources and clients type existed in counsellors with low burnout scores. In this group, counsellors with traumatized or bereaved clients were more likely to be burned out due to the absence of internal resources (e.g.,

counter-transference management ability) whereas counsellors without traumatized or bereaved clients were more likely to be burned out due to the absence of external resources (e.g., autonomy and social support). However, this would not be applied in counsellors with high burnout scores.

Paper 3: Qualitative Research of Burnout Experience among Non-Commissioned Soldiers

Min Hee Cho¹, Hyunju Choi¹, Jayoung Lee²

¹*Korea University, Seoul, Republic of Korea*, ²*Seoul Cyber University, Seoul, Republic of Korea*

This study purports to explore burnout syndrome among non-commissioned officers of professional soldiers in military organizations. The burnout experience of non-commissioned soldiers was examined on aspects of cause, symptom, coping method, and negative influences on family or organizations. For this, in-depth interview was conducted with ten non-commissioned soldiers, and consensual qualitative research method was employed to analyze data.

The results indicate that difficulty in managing enlisted soldiers or/and subordinates, the hierarchical structure of the military organization, task characteristics, and interpersonal conflict were found to cause burnout among non-commissioned soldiers, and consequently the increase of negative feelings, the decrease of morale and concentration, and physical malfunction were reported as symptoms. Moreover, as for the coping methods, problem focused coping (e.g., following the knowledge or/and advices, candid communication), searching for social support coping (e.g., colleague, family), distraction (e.g., physical exercises, hobby), and avoidant coping (e.g., alcohol) were described.

In summary, burnout among non-commissioned soldiers was ascertained to have a negative influence on family and organization (e.g., consideration of turnover or transfer, venting of their anger towards family).

Symposium title: Studies of Worker Well-being: Impacts of Positive and Negative Experiences at Work

Eva Garrosa²

¹*University of Auckland, Auckland, New Zealand*, ²*Universidad Autonoma de Madrid, Madrid, Spain*, ³*University of Graz, Graz, Austria*

This symposium brings together five studies investigating worker well-being. Together they provide novel findings with regard to the importance of recovery experiences for enhancing well-being, and the lasting effects of workplace experiences. Moreover, two studies investigate negative workplace experiences and, parallel to the ongoing impacts of positive work experiences at- and after-work, finds analogous negative impacts for these.

Looking at each paper in more detail, the first paper investigates recovery experiences among 348 participants using a longitudinal study design. Comparing four different theoretical models with structural equation modeling, they found the evidence best-supported a reciprocal causality model of psychological detachment and emotional well-being (measured as anxiety, satisfaction with life, and vigor at work), where each continually influences the other over time.

Recovery is also looked at in the second paper which collected data from 59 New Zealand and United States' employees using a diary method. Multilevel analyses revealed that sleep quality predicted morning positive affect, with positive affect in turn both directly and indirectly predicting engagement, the latter via workplace friendships. Higher engagement was associated with better recovery by the late evening.

The third paper collected diary data from 97 Spanish workers. Using multilevel analyses they found that workplace servant leadership and self-efficacy predicted night-time meaning of life; in turn, previous day servant leadership, meaning of life at night, sleep quality, and self-efficacy predicted morning vitality.

The fourth paper in the symposium explores workplace aggression, in the form of workplace incivility and verbal abuse, and the ramifications of these for well-being. Using a diary study with 105 service sector employees in Madrid, they found that workplace incivility and verbal abuse predicted emotional exhaustion and negative affect. Recovery experiences were also important, with relaxation arguably key in predicting affect at night.

In the fifth and final paper, the researchers argue that workload assessments should consider both objective and subjective strain. They investigated four dimensions of workload, and found that negative working climate had particularly strong relationships with strain and recovery, whereas the three other dimensions – risky working environment, task demands, and bad working structures and processes – had weaker or non-significant effects.

Together, these papers provide a nuanced understanding of the lasting effects of positive and negative experiences at work on well-being, and showcase the utility of diary studies for revealing within-person effects.

Paper 1: The Effect of Psychological Detachment from Work on Well-Being and Life Satisfaction: A Longitudinal Study

Bernardo Moreno-Jiménez, Macarena Gálvez-Herrer, Alfredo Rodriguez, Aldo Aguirre-Camacho

Universidad Autonoma de Madrid, Madrid, Spain

Psychological detachment from work provides physical and psychological disconnection from work, whose effects on work health have rarely been investigated in longitudinal studies. The aim of this paper is to deepen the understanding of the role of psychological detachment and its relationship with anxiety, satisfaction with life, and vigor at work. A six month interval longitudinal study with a sample of 348 participants was conducted. Four models of interaction over time were compared using structural equation modeling and goodness of fit criteria: A model of stability, normal causality, reverse causality, and reciprocal causality.

The inclusion of a model of reciprocal causality between psychological detachment and the dependent variables significantly improves the explanation of the results, according to goodness of fit criteria. The results indicate that the processes of psychological detachment and emotional wellbeing maintain a relationship of mutual influence over time, opening new lines of intervention and prevention of stress in organizations.

Paper 2: Sleep Well and Prosper: Effects of Resources on Daily Engagement and Recovery

Eugenia McGrath¹, Helena Cooper-Thomas¹, Eva Garrosa²

¹University of Auckland, Auckland, New Zealand, ²Universidad Autonoma de Madrid, Madrid, Spain

Research on antecedents of employee engagement has gained momentum in recent years because of findings that consistently show links between engagement and positive organizational and employee outcomes. However, diary studies examining the within-person effects of personal and job resources on employee engagement have only scraped the surface of a topic that warrants in-depth investigation. Replication of extant findings at an international level is useful to assess generalizability; further, many resources and outcomes of engagement are yet to be examined at a day-level. This diary study examined the within-person effects of positive work and off-work experiences on daily engagement levels.

Expanding on the motivational process of the Job Demands-Resources model, we aimed to assess the “gain spiral” assumption of Conservation of Resources theory at the day-level. We hypothesized that night-time recovery serves as a foundation for resource generation in terms of elevated sleep quality and morning positive affect. Additionally, based on the Broaden and Build theory it was anticipated that experiencing positive affect in the morning would encourage workplace friendships and in turn lead to higher engagement. Lastly, because engaged individuals are energetic and draw on their resources to gain additional resources, we hypothesized that higher engagement levels will be associated with higher recovery.

Fifty-nine New Zealand and United States’ employees from various occupations completed online and paper-based surveys across five consecutive working days with three measurement occasions per day. Multilevel modelling results revealed that night-time recovery was not related to sleep quality or positive affect. In line with our predictions, sleep quality was positively related to morning positive affect. Positive affect predicted engagement directly and indirectly through workplace friendships. Lastly, as predicted, higher engagement levels were related to greater night-time recovery. These findings suggest that getting a good night’s sleep enables individuals to start the day anew with positivity; when they bring this to their workplace, it encourages them to reach out to their friends at work. In turn, when employees have pleasant friendship experiences at work they are more likely to be engaged, and then take this positivity home and experience better recovery. This research provides practical implications for organizations and employees, who can both contribute to creating an environment enabling engagement to flourish.

Paper 3: Eudaemonic Well-Being Fluctuations by Previous Day Experiences

Raquel Rodríguez-Carvajal, Marta Herrero, Sara de Rivas, Carlos García-Rubio, David Paniagua

Universidad Autonoma de Madrid, Madrid, Spain

Employee well-being is positively related to desirable outcomes in organizational behavior. However, knowledge is still limited on the daily processes that may influence positive well-being enhancement at the beginning of the work-day. Based on the Job Demands-Resources Model, which posits that job resources lead to positive outcomes, day level servant leadership at work and self-efficacy are expected to positively predict meaning of life at night. Furthermore, servant leadership, self-efficacy, meaning of life, sleep hours and sleep quality are expected to positively predict morning vitality levels the following day.

A diary study with Spanish workers (N=97) was conducted across five consecutive working days, with data collected three times per day: Before the work-day, just after the work-day and at night time. Multilevel analyses demonstrated that meaning of life at night was predicted by servant leadership at work and self-efficacy. Furthermore, morning vitality levels were positively predicted by meaning of life at night, perceptions of servant leadership at work, self-efficacy and sleep quality, but not by sleep duration. These results suggest that morning well-being levels may be influenced by the previous day’s sense of meaning in life and perceptions of servant leadership. In this sense, servant leadership during work-time seems to be important for well-being levels before and after work. Moreover, it appears that belief about our own capacity for achieving goals is a crucial personality variable that may help to enhance the process of eudaemonic well-being.

Paper 4: The Role of Recovery in the Relationship of Workplace Incivility, Verbal Abuse and Their Impact on Daily Emotional Well-Being

Eva Garrosa, Isabel Carmona, Luis Manuel Blanco, Elena del Barrio

Universidad Autonoma de Madrid, Madrid, Spain

Research has revealed a relationship between negative interpersonal workplace interactions and affective consequences. Subtle workplace aggression is a risk factor for employees’ mental health, and incivility has also been indicated as a new means of gender discrimination.

In contrast, unwinding processes, such as daily recovery experiences, have been shown to have a protective impact on employees' well-being. The present diary study seeks to build on recovery research by examining daily fluctuations of workplace incivility and verbal abuse, and their impact on employees' emotional well-being. One hundred and five service sector employees from Madrid completed a general questionnaire (person-level) once, followed by daily questionnaires (day-level) three times a day: 1) morning, before going to work; 2) afternoon, after work; and 3) at night, before going to bed. Participants rated the same variables in the general and daily questionnaires. The variables of interest were measured with the Recovery Experience Questionnaire, PANAS, Workplace Incivility Scale, Interpersonal Conflict at Work Scale and the Scale of Job-Related Exhaustion.

Multilevel analyses showed significant results for workplace incivility and verbal abuse as predictors of emotional exhaustion, as well as an impact of workplace incivility and verbal abuse on negative affect at night. However, non-significant relationships were found for workplace incivility and verbal abuse with positive affect. The four types of recovery were key in predicting affect at night. Specifically, relaxation showed main effects in predicting negative affect, and mastery for positive affect; both detachment and relaxation played a moderating role.

Our findings suggest that the development of workplace policies preventing incivility and verbal abuse is necessary in order to achieve healthy and ethical organizations. Along with these, dissemination of information about the harmful consequences of workplace aggression as well as training workers in self-care strategies such as recovery experiences, can provide first steps toward organizational change and employee well-being.

Paper 5: Assessing Workload, Strain and Resources in the Organization – An Integrated Perspective

Paul Jiménez, Anita Dunkl, Wolfgang K. Kallus
University of Graz, Graz, Austria

Assessing mental workload as a path to a healthy workplace is an important goal we can find in the laws of different European countries. In line with various standards (e.g., the ISO 10075-3:2004), workplace assessment has to be conducted considering both objective workload and subjective strain. However, assessing only risk factors leads to a one-sided view of the work environment. In fact, to recognize if objective mental workload leads to subjective mental strain, the individuals' and organization's resources have to be identified as well. This integrated approach can further ensure the development of sustainable and effective individual and organizational interventions in occupational health.

In the present study, 674 persons from Austria were asked about their experience of workload, strain and recovery at work. Workload was measured with four dimensions: 1) task demands, 2) negative working climate, 3) risky working environment and 4) bad working structures and processes.

The results show that a negative working climate has a strong effect on subjective strain and lower experience of recovery. Bad working structures and processes are found to have an effect on experiences of strain but do not show a significant effect on recovery. A risky working environment on the other hand, shows a negative relationship with recovery, but not with strain. The effect of demanding tasks on both strain and recovery are non-significant.

The findings suggest that different aspects of workload result in a different experience of strain and recovery. Regarding workplace interventions in occupational health, assessing the interaction between workload, strain and recovery is essential. These results should further serve as a base for developing specific interventions on individual and organizational level.

Symposium title: Innovation and Well-Being: Contributes to the Understanding of These Understudied Relationships

Susana M. Tavares

Instituto Universitário de Lisboa (ISCTE-IUL), Lisbon, Portugal

The growing complexity and dynamism of the work environment is placing considerable value on employees' continuous ability to proactively innovate. Employees' propensity to innovate can be conceived as complex behaviour consisting of idea generation, idea promotion and idea realization; with the aim of meeting organizational goals in novel ways (Kanter, 1988; Scott & Bruce, 1994). In this symposium, some authors will present data on creative work behaviours (idea generation), others on innovation climate and still others on voice initiatives. Voice initiatives have been considered a starting point for innovation (LePine & Van Dyne, 1998; Scott & Bruce, 1994), and include both idea generation and idea promotion.

Existing research on organizational innovative behaviour has predominantly emphasized its consequences to performance. So, the potential relationships between innovation and well-being have not yet been fully explored. Therefore, this symposium aims to advance some answers to the following question: Beyond performance, does innovation affect and is it affected by workers' well-being?

Earlier research proposed that there is a relation between well-being (namely, job affect) and proactive behaviour (Bindl & Parker 2010; Parker et al. 2010; Strauss et al., 2009); and an extensive experimental literature in psychology has examined the relationship between affective processes and creative cognition (for reviews, see Fiedler and Forgas, 1988; Isen, 1999, Forgas, 2001). However, studies outside the laboratory relating creativity or innovation and well-being are rare (for some exceptions see Amabile et al., 2005; George & Zhou, 2002; Madjar, Oldham, & Pratt, 2002).

Therefore, this symposium will try to fill that gap with the presentation of five papers. The first two presentations will test the role of work engagement (a well-being measure) as an explanatory mechanism for the relationship between transformational leadership and employees' creative work behaviour and socio-moral climate and voice behaviours, respectively. The last three presentations will be focused on the consequences of innovation for employees' well-being. Thus, the third presentation will analyse the impact of organizational climate for innovation on employee's burnout. The fourth presentation will explore boundary conditions (such as voice perceived impact and voice costs) for the relationship between innovation (measured as voice behaviours) and employee well-being. Lastly, in the final presentation the author will present the proposal and empirical test of a model that articulates voice behaviours, job affect and employees' health.

Paper 1: The Road from Transformational Leadership to Creative Work Behaviour

Pascale M. Le Blanc, Koen W. Crooymans

Eindhoven University of Technology, Human Performance Management Group, Eindhoven, The Netherlands

Employees' creative ideas are the building blocks for organizational change and innovation. Thus, identifying the antecedents of employee creativity is important as it enables present-day organizations to survive, adapt and to gain competitive advantage. The current study focuses on leadership behaviour in relation to employee creativity. The processes by which leaders encourage employees to become creatively involved in their work have yet to be fully understood. According to Amabile et al. (2004) the literature linking specific leader behaviours to group performance is scant, and the literature linking specific leader behaviours to individual creative performance is even smaller. Moreover, Carmeli & Schaubroeck (2007) noted that one of the key questions in creativity research relates to the motivation of individuals to become and remain creatively involved at work.

The current study aimed at uncovering the motivational process underlying the relationship between leaders' transformational leadership behaviours and employees' creative work behaviours. More specifically, we tested the hypothesis that this relationship is mediated by employees' level of work engagement. Evidence for a significant positive relationship between transformational leadership and employees' work engagement was already provided in a diary study by Tims et al. (2011). Based on Fredrickson's Broaden and Build theory (1998), we also propose a positive relationship between employees' work engagement level and their display of creative work behaviour. In addition, we propose that both of the above relationships are moderated by employees' level of job autonomy.

Data were collected by means of self-report questionnaires that were filled out by 130 employees of a big public transport company in the Netherlands. The focal constructs of our research model were assessed by means of validated measures.

Results confirmed our main hypothesis, as the relationship between transformational leadership and creativity was fully mediated by work engagement. However, contrary to expectations, neither the relationship between transformational leadership and work engagement nor the relationship between work engagement and creative work behaviour was moderated by job autonomy. Instead, we found that work engagement also fully mediated the relationship between job autonomy and creative work behaviour. So, both transformational leadership and job autonomy contribute to employee work engagement, which in turn is significantly positively related to employee creative work behaviour.

In future research, the above relationships may be tested using a longitudinal design and/or more objective measures of creative work behaviour.

Paper 2: Promoting Voice Behaviours: The Role of Socio-Moral Climate and Engagement

Silvia A. Silva

Instituto Universitário de Lisboa (ISCTE-IUL), Lisbon, Portugal

Socio-moral climate is a specific organizational climate that refers to perceptions about specific organizational structure and practices responsible for a prosocial environment of socialization with democratic and moral guidelines (Weber et al, 2008). This type of climate is special relevant nowadays with companies facing demanding economic pressures. This climate includes five dimensions: open confrontation of conflicts; reliable and constant appreciation; open communication and participative cooperation; trust based assignment and allocation of responsibility and organizational concern for the individual. Recent studies have shown that perceptions of higher socio-moral climate are positively associated with increases in prosocial behaviours and organizational commitment (Verdorfer et al, 2012). Our previous research already confirmed that socio-moral climate explains engagement at work and especially vigour and dedication. However, until now, it has not been explored the role of socio-moral climate on voice behaviours. This paper intends to test that relation and also the mediator role of engagement.

One study was conducted to test the direct effect and mediator effect. The sample includes approximately 180 workers from different organizations, 54% male, 57% with ages between 30-49 years old, 63% with a degree, and 56% with a long term contract. All the variables were assessed using validated scales (SMC with Verdorfer et al, 2012 scale; Engagement with Schaufeli et al., 2002 scale; Voice with Naus et al., 2007 scale) with and good reliability results (α between .80 and .95). Almost all the voice items are related to speak up for making suggestions of improvements or solutions that will benefit the organization or the workgroup.

Results confirm the important role of socio-moral climate; and especially of open confrontation of conflicts, and reliable and constant appreciation. Engagement contributes for explaining voice behaviours but the mediator effect was not confirmed. These results will be discussed for suggesting further studies and implications for organizations.

Paper 3: Climate for Innovation as a Preventive Factor of Burnout in Police Officers

Esther M. García-Buades, Carmen Ramis-Palmer, M. Antonia Manassero
University of Balearic Islands, Mallorca, Spain

Previous research results suggest that an innovative climate would enable employees to develop coping mechanisms or improved work-related processes to relieve the potential negative impact of work demands on their wellbeing (King, de Chermont, West, Dawson & Hebl, 2007). The objective of this study is to test for the potential buffering effect of climate for innovation on burnout levels of municipal police in Spain. The sample consists of 175 local police officers, 90% male officers, mean age was 35, average tenure 12 years, 72% held a permanent contract.

The instrument used was a self-administered questionnaire, including measures of three climate types(innovation, support, and rules ; Spanish version of the FOCUS – 93), and burnout (Maslach Burnout Inventory- General Survey). Multiple regression results show that out of all climates, climate for innovation stands out as the most powerful climate facet to prevent burnout (emotional exhaustion, cynicism, self-efficacy).

Policy makers in police institutions should strive for implementing innovation policies and allowing for participation of police officers in the innovating process. This study is a contribution to uncovering potential protective factors to prevent burnout.

Paper 4: Well-being Outcomes of Resource Investment and Conservation for Survivors of Redundancies: Context Matters

Michelle Hammond¹, Christine Cross¹, Ciara Farrell², Dawn Eubanks³
¹*University of Limerick, Limerick, Ireland*, ²*EnAct, Dublin, Ireland*, ³*University of Warwick, Coventry, UK*

In the current global economic climate, redundancies have become the norm rather than the exception. Organizations implement downsizing initiatives as a mechanism to reduce costs associated with employee headcount. While the goal of these downsizing initiatives is to achieve organizational efficiency, productivity, and competitiveness (Cascio, 1993) the reality can be somewhat different. The achievement of such strategic direction and organizational goals depends on the survivors' attitudes, commitment and motivational levels (Vinten & Lane, 2002; Littler, Wiesner & Dunford, 2003). Innovation has also become increasingly important in the downsized organization as a means of maintaining competitive advantage in an ever changing and turbulent environment. However, a substantive body of research points to the potentially conflicting objectives of innovation and downsizing whereby downsizing sees a decline in employee innovative behaviours (Amabile & Conti, 1999).

The purpose of the current study is to examine the outcomes of innovation survivors of downsizing, specifically burnout and turnover intentions. We discuss innovation as a form of voice behaviour. While a plethora of work exists as to the antecedents of innovation, the literature is scant surrounding the outcomes of innovation during or after downsizing. By drawing on the Conservation of Resources Theory (Hobfoll, 1989), we also explore boundary conditions for the relationship between innovation and employee well-being. Specifically, we propose that when perceived impact is low and voice costs are high engaging in innovation may positively related to burnout and turnover intentions, whereas the relationship may be negative when voice costs are low and impact is high.

The results of the current study supported the hypothesis that when employees perceive high voice costs associated with speaking up innovation is positively related to burnout. The study also found a significant interaction between perceived impact and innovation on burnout however this was not in the expected direction. Contrary to speculation, when employees perceived high impact innovation was positively related to burnout. The current study lends itself to the relatively understudied area of the outcomes of innovation following downsizing and suggests how this can be managed more effectively in future downsizing situations.

Paper 5: Voice Initiatives, Affect at Work and Employee's Health

Susana M. Tavares

Instituto Universitário de Lisboa (ISCTE-IUL), Lisbon, Portugal

Although determinants of voice have been extensively studied, no research has addressed the impact of voice on employee's health. In this study we analyze the effects of employees having initiative behaviors - like voice - on employees' perceived health. Our contribution to the literature is threshold. First, this research focuses on voice's consequences, which contrasts with the majority of the existing literature that typically has focused on voice's predictors. Second, we study voice outcomes for the individual and not for the group or the organization. Specifically, we analyze the impact of voice behaviors on employee's well-being, an understudied outcome in what regards initiative behaviors. Finally, we investigate this effect on a blue-collar workers' sample, which is not common. In this paper, we propose and empirically test a voice-affect-health model; integrating literatures from voice and well-being. More specifically, the current study examines the effects of employees having innovative behaviors, like voice, on employees' job affect and perceived health.

Drawing on Conservation of Resources Theory (Hobfoll, 1989), we tested two competing hypothesis regarding how upward promotive voice behaviors are related to well-being: a resource-depletion hypothesis and a resource-acquisition hypothesis. According to the resource-depletion hypothesis, voice behaviors would be negatively related to employees' well-being. Since voice is an initiative behavior that is risky for the employee and involves effort and consumes time and energy, which will drain some of the employee's resources (Ng & Feldman, 2012). Conversely, the resource-acquisition hypothesis posits that voice can be instrumental, not only, in obtaining additional resources that help people deal with work stressors, but also in achieving personal goals and needs (Ng & Feldman, 2012). To test these hypotheses we developed a study using multisource data (employees and supervisors).

Results from 171 employee-supervisor dyads revealed that employee's voice behavior reported by the supervisor was positively related to employee's perceived health, giving support to the resource-acquisition proposition. Moreover, results suggested that this relationship was explained by activated pleasant affect felt at work. We found that employee's voice initiatives were related to higher levels of activated pleasant affect experienced at work. In turn, higher levels of activated pleasant affect were associated with employee's perception of a better health. The presentation will discuss implications for future research as well as for managerial practice.

Symposium title: Occupational E-Mental Health: An Effective and Promising Route to Foster Health and Well-Being in Stressed Employees? Part 1

Dirk Lehr¹, Anna Geraedts²

¹*Division of Online Health Training, Innovation Incubator, Leuphana University, Lueneburg, Germany,* ²*Department of Clinical Psychology and EMGO Institute for Health and Care Research, VU University and VU University Medical Center, Amsterdam, The Netherlands*

E-Mental Health is an emerging scientific and practical area and has gained increasing attention in the last decade. Online interventions, in particular, have proven to be effective in clinical samples, for example with regard to the treatment of depression, anxiety or sleep.

Online trainings were also found to be effective in changing negative health behaviours (such as, reduction of alcohol consumption), although yielded mixed results for smoking cessation. While internet-based psychotherapy has been investigated in a large number of randomised controlled trials, only few interventions were developed to address the specific needs of working populations. Hence, evidence from high-quality randomised controlled trials for the effectiveness of Occupational E-Mental Health interventions is scarce.

Online occupational health interventions might complement well established routes to foster health, such as group face-to-face stress-management trainings. Moreover, there might be additional advantages for employees in using online occupational health interventions, for example: online interventions assure anonymity when participants want to avoid stigmatisation, or are afraid of self-disclosure in group settings; they are easily accessible at any time; participants can work at their own pace and go through material as often as they like; and the training can be carried out at home which saves time as there is no need to travel. Finally, web-based interventions may attract people who do not make use of traditional health services. The aim of the symposium is to present state-of-the-art Occupational E-Mental Health interventions from Europe and the US, share experiences with regard to their acceptability and effectiveness and discuss their implementation into routine care.

Part one of the symposium will include the presentation of a mindfulness at work training. The intervention was evaluated by comparing an online virtual classroom versus an in-person classroom training version. Especially the comparison of traditional group face-to-face and online training format is innovative and of major interest.

Two presentations will introduce 'GET.ON Recreation' an online training to foster recreational activities, mental detachment from work and sleep quality. While the first presentation highlights the training concept and the effects on sleep quality and mental detachment, the second presentation focuses on cost-effectiveness. Cost-effectiveness studies alongside RCTs are becoming more and more common, as they provide information that are of importance for the implementation of occupational health interventions (i.e. for companies).

The fourth paper will present 'iSTRESS', a training tailored to the specific need of managers. Likewise, 'GET.ON Recreation' was tailored to school teachers, which raises the question of advantages and disadvantages of tailoring interventions.

Paper 1: Effective and Viable Mind-Body Stress Reduction in the Workplace: A Randomized Controlled Trial

Ruth Q Wolever¹, Kyra J Bobinet², Elizabeth R Mackenzie³, Erin Fekete⁴, Catherine A Kusnick⁵, Michael Baime⁶

¹*Duke Integrative Medicine and Department of Psychiatry & Behavioral Sciences, Duke University School of Medicine, Durham, North Carolina, USA,* ²*Health & Wellness Innovation, Aetna Inc., San Francisco, USA,* ³*School of Arts and Sciences, University of Pennsylvania, Philadelphia, USA,* ⁴*School of Psychological Sciences, University of Indianapolis, Indianapolis, USA,* ⁵*Headlands Consulting, Orange County, USA,* ⁶*Penn Program for Mindfulness, University of Pennsylvania School of Medicine, Philadelphia, USA*

Highly stressed employees are subjected to greater health risks, increased cost, and productivity losses than those with normal stress levels. To address this issue in an evidence-based manner, work-site stress management programs must be able to engage individuals as well as capture data on stress, health indices, work productivity, and healthcare costs.

In this randomized controlled pilot, our primary objective was to evaluate the viability and proof of concept for two mind-body workplace stress reduction programs (one therapeutic yoga-based and the other mindfulness-based). A second objective was to evaluate two delivery venues of the mindfulness-based intervention (online versus in-person).

Intention-to-treat principles and 2 (pre and post) X 3 (group) Repeated Measures ANCOVA procedures examined group differences over time on perceived stress, and secondary measures to clarify which variables to include in future studies: sleep quality, mood, pain levels, work productivity, mindfulness, blood pressure, breathing rate, and heart rate variability (a measure of autonomic balance). Two-hundred thirty-nine (239) employee volunteers were randomized into a therapeutic yoga worksite stress reduction program, one of two mindfulness-based programs, or a control group that participated only in assessment.

Compared to the control group, the mind-body interventions showed significantly greater improvements on perceived stress, sleep quality and the heart rhythm coherence ratio of heart rate variability. The two delivery venues for the mindfulness program produced basically equivalent results. Both the mindfulness-based and therapeutic yoga programs may provide viable and effective interventions to target high stress levels, sleep quality and autonomic balance in employees.

Paper 2: Efficacy an Online Recreation Training for Employees Affected by Symptoms of Insomnia: Results from a Randomized Controlled Trial

Dirk Lehr¹, Hanne Thiar¹, David Ebert^{1,3}, Bernhard Sieland¹, Matthias Berking^{1,3}, Heleen Riper^{2,1}

¹Division of Online Health Training, Innovation Incubator, Leuphana University, Lueneburg, Germany, ²VU University & GGZinGeest, Amsterdam, The Netherlands, ³Philipps-Universität, Faculty of Psychology, Clinical psychology and psychotherapy, Marburg, Germany

Studies suggest that recovery from work and the ability to recreate one`s resources is a key factor relevant for maintaining and restoring physical and mental health. Especially, restorative sleep is of major importance for successful recovery from work-stress. Insomnia is a risk factor for adverse health, such as subsequent depression or cardiovascular events. Insomnia complaints often result from cognitive arousal and deficient cognitive detachment from work. Insomnia is also associated with a lack of positive recreational activities that facilitate cognitive detachment and reduce work-related rumination.

Therefore, GET.ON Recreation was developed and aimed to target: (a) sleep, (b) cognitive detachment and (c) recreational activities. GET.ON Recreation is an online training combining techniques from cognitive behavioral therapy for insomnia, behavioral activation and techniques to reduce rumination and to foster cognitive detachment from work-related problems. The aim of the present study was to evaluate the efficacy of this guided online training for employees affected by insomnia.

Methods: In a two-arm randomized controlled trial (N=128), the effects of a guided online training were compared to a waitlist-control condition. Teachers with high insomnia complaints (Insomnia Severity Index ISI \geq 15) and work-related rumination (Irritation Scale, subscale Cognitive Irritation \geq 15) were included in the study. The primary outcome measure was insomnia severity. Additionally, an economic evaluation was conducted.

Results: Preliminary results based on 85% of the participants and per protocol analyses demonstrated training to be effective. The Intervention group improved in their sleep quality from pre- to post-training by $d=2.0$. At post-training the ISI-scores of the trainings group were substantially better than the respective scores in the control-group ($d=1.3$). Based on the Jacobson and Truax method to determine reliable change the Number Needed to Treat were found to be $NNT=2$. Furthermore a strong "side effect" on the reduction of depression was observed ($d=0.8$). Likewise, the training group achieved a reduction in work-related rumination ($d=0.7$).

Discussion: To the best of our knowledge, this is the first study evaluating an online training targeting insomnia complaints and work-related rumination. Preliminary results demonstrated

the efficacy of the training, although the effects might decrease when Intention-to-Treat analysis will be conducted using the whole sample. The 6-month follow up will be completed in January 2014 and data will be presented. Finally it is suggested that the trainings should be investigated in other occupational groups and other training formats such as pure self-help.

Paper 3: Log in and Breathe Out: Cost-Effectiveness of an Internet-Based Recreation Training for Better Sleep in Stressed Employees: Results from a Randomized Controlled Trial.

Hanne Thiar¹, Stephanie Nobis¹, Dirk Lehr¹, David Ebert^{1,3}, Matthias Berking^{1,3}, Heleen Riper^{2,1}

¹*Division of Online Health Training, Innovation Incubator, Leuphana University, Lueneburg, Germany,* ²*VU University & GGZinGeest, Amsterdam, The Netherlands,* ³*Philipps-Universität, Faculty of Psychology, Clinical psychology and psychotherapy, Marburg, Germany*

Purpose: Insomnia and work-related stress often co-occur. Both are associated with substantial socio-economic costs due to e.g. a reduced productivity at the work place (i.e. presenteeism). Insomnia complaints of people suffering from work stress are correlated with a deficient recovery from work stress. We therefore developed a new training based primarily on cognitive behavioral therapy for insomnia, tailored to stressed employees with deficient mental detachment from work-related problems. Although proven to be effective, CBT-I is rarely implemented. Internet-based CBT-I interventions (iCBT-I) were introduced as a method to potentially reduce this gap and have been evaluated with regard to their efficacy. There is less known about the cost-effectiveness of iCBT-I in populations, especially for people affected by work-related stress.

Methods: In a two-arm randomized controlled trial (N = 128), the effects of a guided iCBT-I training (GET.ON Recreation) will be compared to a waitlist-control condition. German teachers with clinical significant insomnia complaints (Insomnia Severity Index, ISI, >14) and work-related strain (Cognitive Irritation >14) are included. Economic parameters are measured at baseline and at 6-months follow-up. The economic analysis will be performed from a societal perspective. We will conduct a cost-effectiveness analysis (CEA) and a cost-utility analysis (CUA). Using the incremental cost-effectiveness ratio (ICER), we will show the differences in the costs and benefits between the two groups.

Results: Preliminary results from the 6-month follow-up will be available by April 2014. The analyses will focus on the costs of presenteeism that is assumed to cause the bulk of the costs of insomnia complaints.

Conclusion: To the best of our knowledge, this is the first study to evaluate cost-effectiveness of an iCBT-I training tailored to a population with work-related stress. If this intervention is cost-effective, it could serve as a possibility for employers to support their employees in coping with insomnia and reduce the undersupply of CBT-I.

Paper 4: A Randomized Controlled Trial of a Guided and Individualized, Web-Based, Stress Management Program for Stressed Managers

Robert Persson Asplund¹, Jesper Dagö¹, Gerhard Andersson¹, Per Carlbring², Brjánn Ljótsson³

¹*Department of Behavioral Sciences and Learning, Linköping University, Linköping, Sweden,* ²*Department of Psychology, Stockholm University, Stockholm, Sweden,* ³*Department of Clinical Neuroscience, Division of Psychology, Karolinska Institute, Stockholm, Sweden*

Purpose: Occupational stress is a common health issue and it causes significant problems for many individuals and rehabilitation of stress is costly to society. A substantial part of the total costs of stress and stress related disorders are due to work absenteeism, work impairment, and loss of work productivity. Occupational stress appears to be especially frequent among

low and mid-level managers. Research has shown that web-based behavioral health programs are effective for treating anxiety, depression and other health related issues. These programs increase accessibility of evidence-based interventions to individuals who are not able or willing to receive such in-person treatments. Stress management training has empirical support, but little data exists on its efficacy with stressed managers when delivered via the internet. In light of these observations we are currently conducting a randomized controlled trial of a guided and individualized, web-based, stress management program (iSTRESS) for stressed managers.

Methods: The participants are recruited by self-referral through advertisement in national newspapers and on the internet. The main inclusion criterion was stress as a primary diagnosis. Participants with comorbid diagnosis (anxiety, depression, insomnia) were also included as long as the stress diagnosis was considered primary. We aim to include a total of 100 participants and randomize them into two groups (iSTRESS or an attention control group) that will discuss stress-related topics in a web-based and moderated forum. Both programs will last for eight weeks and all participants will receive a weekly mail contact with a psychologist. Participants will be evaluated on self-report measures, for stress (PSS), burnout (SMBQ), depression (MADRS), anxiety (BAI), insomnia (ISI) and other health-related issues. We will also measure health-economic aspects, such as: absenteeism, use of medication, and care.

Results: Analyses will be based on both study completers and intention to treat. Final pre-post treatment results will be available in December and 3 month follow-up in March 2014. Preliminary result from a previous small sample pilot (n=8) trial on the iSTRESS-program showed promising results on measures of stress at post-assessment (7 points improvement on the Perceived Stress Scale, pre=25).

Conclusions: To our knowledge this is the first controlled trial examining the efficacy of a web-based stress management program for managers. Final pre-post and 3 month follow-up treatment results will be available for presentation at the EAOHP 2014 conference.

Symposium title: Occupational E-Mental Health: An Effective and Promising Route to Foster Health and Well-Being in Stressed Employees? Part 2

Dirk Lehr¹, David Ebert^{1,2}

¹*Division of Online Health Training, Innovation Incubator, Leuphana University, Lueneburg, Germany,* ²*Philipps-Universität, Faculty of Psychology, Clinical psychology and psychotherapy, Marburg, Germany*

E-Mental Health is an emerging scientific and practical area and has gained increasing attention in the last decade. Online interventions, in particular, have proven to be effective in clinical samples, for example with regard to the treatment of depression, anxiety or sleep. Online trainings were also found to be effective in changing negative health behaviours (such as reduction of alcohol consumption), although yielded mixed results for smoking cessation. While internet-based psychotherapy has been investigated in a large number of randomised controlled trials, only few interventions were developed to address the specific needs of working populations. Hence, evidence from high-quality randomised controlled trials for the effectiveness of Occupational E-Mental Health interventions is scarce.

Online occupational health interventions might complement well established routes to foster health such as group face-to-face stress-management trainings. Moreover, there might be additional advantages for employees in using online occupational health interventions, including: online interventions assure anonymity when participants want to avoid stigmatisation or are afraid of self-disclosure in group settings; they are easily accessible at any time;

participants can work at their own pace and go through material as often as they like; and the training can be carried out at home which saves time as there is no need to travel. Finally, web-based interventions may attract people who do not make use of traditional health services.

The aim of the symposium is to present state-of-the-art Occupational E-Mental Health interventions from Europe and the US, share experiences with regard to their acceptability and effectiveness and discuss their implementation into routine care.

Part two of the symposium will focus on online occupational health interventions for employees with depressive symptoms. The first presentation will introduce Happy@Work, a preventive web-based guided self-help course that is based on problem-solving techniques. Likewise, GET.ON Problem-solving utilises similar intervention techniques and will be presented in the second paper. While participants of Happy@Work were recruited directly from companies, participants of GET.ON Problem-solving were recruited through staff associations and participants of GET.ON Stress were recruited from the general population. Thus, the comparison of different recruitment strategies will be discussed within the symposium. The third paper will present GET.ON Stress, a training that is also based on problem-solving techniques and aims to reduce symptoms of stress. However, it also includes a strong focus on emotion-regulation and acceptance of unsolvable problems, an aspect which is often underrepresented in traditional training concepts.

Paper 1: Happy@Work: (Cost-) Effectiveness of a Preventive Web-Based Guided Self-Help Course for Employees with Depressive Symptoms

Anna Geraedts¹, Noortje Wiezer², Annet Kleiboer¹, Pim Cuijpers¹, Willem van Mechelen³

¹Department of Clinical Psychology, VU University, Amsterdam, The Netherlands, ²TNO, Hoofddorp, The Netherlands, ³Department of Public and Occupational Health, VU University Medical Center, Amsterdam, The Netherlands

Purpose: Depressive disorders are highly prevalent in the working population and are associated with excessive costs for both society and companies. A substantial part of the total costs of depressive disorders are due to work absenteeism, work impairment, and loss of work productivity with estimates ranging between 70-85%. These costs are directly paid for by companies. Research has shown that depressive symptoms can be treated effectively via web-based guided self-help. It has also been shown that this kind of treatment is cost-effective and has high accessibility. However, a web-based guided self-help intervention for depressive symptoms that incorporates work related (stress) problems have not yet been developed. Such an intervention could be valuable and cost efficient because it might not only reduce depressive symptoms, work absenteeism and presenteeism but also increase work productivity. Therefore, we developed a web-based guided self-help course for employees with depressive symptoms who are not on sick leave called Happy@Work.

Method: This study is a two arm randomized controlled trial comparing a web-based guided self-help course with care-as-usual. We recruited employees from 6 different companies in the Netherlands. The main inclusion criterion was elevated depressive symptoms. The intervention consisted of 6 weekly lessons and coaching was provided via the website. Self-report questionnaires on depressive symptoms (CES-D; primary outcome), anxiety (HADS), burnout (MBI) and work performance (HPQ; secondary outcomes) were completed at baseline, post-treatment, 6 months and 12 months. A total of 231 employees were randomized to either the intervention group (n=116) or care-as-usual (n=115). The economic evaluation will be performed from both the societal and company's perspective and we will perform cost-effectiveness, cost-utility and cost-benefit analysis.

Results and Conclusion: Both the intervention and the CAU showed significant improvements on the primary outcome depressive symptoms at 8 weeks, but no differences between the groups was found ($d = 0.16$, 95% CI: $-0.10 - 0.41$, $p = .29$). Significant effects were found in

favor of the intervention group for anxiety symptoms ($d = 0.16$, 95% CI: $-0.09 - 0.42$, $p = .04$) and exhaustion ($d = 0.17$, 95% CI: $-0.09 - 0.43$, $p = .02$), but effect sizes were small. Follow-up data are not yet available and will be presented at the conference. This study showed that a web-based guided self-help course for employees with depressive symptoms is not more effective in reducing depressive symptoms among employees than care-as-usual on the short-term. We will present follow-up and cost-effectiveness results at the conference.

Paper 2: Internet-Based Prevention of Depression in Employees. A Randomized Controlled Trial

David Ebert^{1,2}, Dirk Lehr¹, Leif Boß¹, Heleen Riper^{1,3}, Pim Cuijpers^{1,3}, Hanne Thiert¹, Matthias Berking^{1,2}

¹*Division of Online Health Training, Innovation Incubator, Leuphana University, Germany,*
²*Philipps-Universität, Faculty of Psychology, Clinical psychology and psychotherapy, Marburg, Germany,*
³*Department of Clinical Psychology, VU University, Amsterdam, The Netherlands*

Background: Many employees are highly affected by strain-related health problems, such as depression. Depression is not only associated with personal distress and diminished quality of life, but also with substantial socio-economic costs due to a reduced labour productivity, absenteeism and early retirement. Low-threshold interventions (such as, Internet-based guided self-help) might have the potential of reaching employees earlier than traditional interventions, and thereby may prevent the onset of a full blown depressive disorder. Recent studies provide evidence for the efficacy of Internet-based problem solving therapy (PST) for symptoms of depression. The scope of PST is across life domains, so it can be applied to work related problems and others as well. However, to the best of our knowledge no study has yet evaluated the potential of Internet- based indicative preventive interventions in employees with depressive symptoms so far.

Objective: This study aimed to evaluate the efficacy of a web-based guided problem solving intervention for employees (teachers) with depressive symptoms. This randomized controlled trial (RCT) aimed to evaluate the efficacy of an internet-based guided problem solving training (iPST) in employees with depressive symptoms (i.e. teachers) compared to a waitlist-control group.

Methods: A sample of 150 teachers with elevated depressive symptoms (CES-D > 16) was assigned to either the iPST or to the WLC. The iPST consists of five lessons, including problem-solving and rumination techniques. Self-report data were assessed at baseline, after seven weeks, three months and six months follow-up. The primary outcome was depressive symptom severity (CES-D).

Results and Conclusion: iPST participants showed a significant higher reduction in depressive symptoms after treatment ($d = 0.64$, CI: $0.31 - 0.97$) after 3 months ($d = 0.60$, CI: $0.27 - 0.93$) and after 6 months ($d = 0.46$, CI: $0.14 - 0.78$). Participants of iPST showed also significant higher reductions in stress-related outcomes. iPST is effective in reducing symptoms of depression in teachers. Disseminated on a large scale it could potentially reduce the burden of stress-related health problems in teachers. Future studies should evaluate internet-based guided self-help approaches in other working populations.

Paper 3: Efficacy and Cost-Effectiveness of a Web-Based Stress-Management Training in Employees: Preliminary Results of a Randomized Controlled Trial

Elena Heber¹, Dirk Lehr¹, David Ebert^{1,3}, Stephanie Nobis¹, Matthias Berking^{1,3}, Heleen Riper^{1,2}
¹*Division of Online Health Training, Innovation Incubator, Leuphana University, Germany,*
²*Department of Clinical Psychology, VU University, Amsterdam, The Netherlands,*
³*Philipps-Universität, Faculty of Psychology, Clinical psychology and psychotherapy, Marburg, Germany*

Background: Work-related stress is associated with a variety of mental and emotional problems. Furthermore, it can lead to substantial economic costs due to lost productivity, absenteeism or the inability to work. Traditional face-to-face stress management interventions

(SMIs) for employees have been proven to be effective. Compared to the traditional format of SMIs, web-based interventions offer the advantages of being available 24/7 and are characterised by a low access threshold and potentially cost-effective. However, the evidence in this field is not comprehensive. The current study examines the efficacy and cost-effectiveness of a web-based guided stress-management training aimed at reducing stress in adult employees.

Method: The study targets stressed adult employees. A randomised controlled trial (RCT) design will be applied. Based on the power calculation $d=.35$ ($1-\beta$ of 80 %, $\alpha = .05$), 264 participants have been recruited and randomly assigned to either the intervention group or a six-month waitlist control group. Inclusion criteria include an elevated stress level (Cohen's Perceived Stress Scale-10 ≥ 22) and current employment. Exclusion criteria include risk of suicide or previously diagnosed psychosis or dissociative symptoms. Perceived stress will be assessed as the primary outcome. Secondary outcomes include depression, anxiety and emotional exhaustion. Data are collected at baseline and seven weeks and six months after randomisation. An extended follow up at 12 months is planned for the intervention group. Moreover, a cost-effectiveness analysis will be conducted from a societal perspective and will include both direct and indirect health care costs. Data will be analysed on an intention-to-treat basis and per protocol.

Results: Based on 80% of the participants, a distinct improvement of perceived stress could be found at post-test (Cohen's $d=0.85$). For a clinical relevant change in perceived stress, the number needed to treat according to reliable change is $NNT=3$. Absenteeism and presenteeism rates will be assessed at 6-month follow up and preliminary results will be available in spring 2014.

Conclusions: Substantial negative consequences of work-related stress emphasize the necessity of effective stress management programs. If the current internet intervention proves to be effective, an application as a preventative, economical stress management tool in the workplace health promotion is conceivable.

Symposium title: Appreciation at Work: New Insights

Nicola Jacobshagen

University of Bern, Bern, Switzerland

Short Overview: Task characteristics have been a focus of occupational stress research for many years (e.g., Caplan, Cobb, French, Harrison, & Pinneau, 1975; Karasek, 1979; Kornhauser, 1965; Ganster & Schaubroeck, 1991; Kompier, 2003; Parker & Wall, 1998; Sonnentag & Frese, 2003). Workload and conflicting expectations have been especially prominent in this research (e.g., Beehr & Glazer, 2005; Spector & Jex, 1998). We all know the delight due to the appreciation that we receive at work. It gives us the feeling of being acknowledged and likely encourages us to work even harder. Herzberg (1974) was among the first to recognize that appreciation enhances motivation and job satisfaction. However, despite this early recognition, there is only scarce research on this issue. The effort-reward model by Siegrist (1996) claims that appreciation is one of the three reward-factors along with money and job security/career opportunities, and findings by van Vegchel et al., 2002 suggest that appreciation is the most important one. Supervisors, colleagues and, clients (Jacobshagen & Semmer, 2009) have been identified as sources of appreciation at work, and a cross-sectional study showed promising relationships to work satisfaction and reduced negative affect (Stocker et al., 2010). Questions about other relationships, causes, and consequences of appreciation at work remain unanswered by scientific research yet.

In this symposium, we focus on appreciation, especially on appreciation at work longitudinally and with a diary approach (Jacobshagen & Semmer, 2009; Semmer & Jacobshagen, 2003; Semmer, Jacobshagen & Meier, 2006; Siegrist, 1996). Social support and job control have

been prominent as important resources at work. We propose that appreciation at work might be equally important. So, at our symposium we will discuss that appreciation at work matters. The goal of the symposium is to discuss what we have researched so far – after initial research in 2009-2012 – and we will present new results with different statistical methods, using diary analyses (multi-level) as well as standard procedures like mediation-models.

Paper 1: Appreciation at Work: Causes and Consequences. A new perspective

Nicola Jacobshagen, Norbert K. Semmer
University of Bern, Bern, Switzerland

Objectives. Work is increasingly stressful. Appreciation at work has been considered an important resource at work (Semmer & Jacobshagen, 2003; Semmer, Jacobshagen & Meier, 2006; Siegrist, 1996). This study aims at testing the hypothesis that daily positive work events (e.g., appraisal from one's supervisor, appreciation from patients) are an important source of appreciation at work, which are positively associated with different indicators of well-being at the end of a working day.

Methods. The present analysis is based on data from a diary study over three consecutive working days with 195 healthcare professionals. Participants were 67.4% females with a mean age of 42.73 ($SD = 10.4$). From these, 22.3% had a leadership position and worked on average 34.73 hours per week ($SD = 3.32$). Daily positive events at work were measured by event sampling (cf. Gross et al., 2011). The number of positive events per day was used for testing the hypotheses. At the end of work, indicators of well-being (i.e. work engagement, and positive affect) as well as the mediator state self-esteem were measured. Data were analyzed by multilevel modeling using HLM.

Results and conclusions. As predicted, daily positive events positively predicted well-being indicators (i.e. work engagement, and positive affect). On days with a high number of positive events at work, healthcare professionals experienced a higher level of well-being at the end of the work day. In addition, state self-esteem seems to be a mediator in the relationship between positive work events and well-being. Findings suggest that positive work events indeed are an important source of appreciation at work and can help employees to improve their well-being on an intra-individual basis.

Paper 2: Short-Term Effects of Positive Events at Work as a Source of Appreciation: A Diary Study within the Healthcare Sector

Judith Volmer
University of Bamberg, Bamberg, Germany

Objectives: Current work environments have become increasingly stressful. Appreciation at work has been considered an important resource at work (Semmer & Jacobshagen, 2003; Semmer, Jacobshagen & Meier, 2006; Siegrist, 1996). The current study aims at testing the hypothesis that daily positive work events (e.g., appraisal from one's supervisor, appreciation from patient) are an important source of appreciation at work which are positively associated with different indicators of well-being at the end of work (i.e., work engagement, vigor, and positive affect). In addition, in order to better understand *why* positive work events should be beneficial for employees' well-being, the study explores the hypothesis that daily self-esteem mediates the relationship between positive events and well-being.

Methods: The present analysis is based on data from a diary study over three consecutive working days with 85 healthcare professionals in German hospitals. Participants were 62.4% females with a mean age of 40.73 ($SD = 11.7$). From these, 21.2% had a leadership position and worked on average 37.73 hours per week ($SD = 4.46$). Daily positive events at work were measured by event sampling (cf. Gross et al., 2011). The number of positive events per day was used for testing the hypotheses. At the end of work, indicators of well-being (i.e. work engagement, vigor, and positive affect) as well as the mediator state self-esteem were measured. Work engagement was assessed with a scale from Bledow, Schmitt, Frese and

Kühnel (2011), vigor with the procedure from Sonnentag and Niessen (2008), and positive affect with the procedure from Sonnentag, Binnewies, and Mojza (2008). State self-esteem was measured using the scale from Meier, Semmer, and Hupfeld (2009). Data were analysed by means of multilevel modeling using HLM.

Results: As predicted, daily positive events positively predicted well-being indicators (i.e. work engagement, vigor, and positive affect). On days with a high number of positive events at work than usual, healthcare professionals experienced a higher level of well-being at the end of the work day. In addition, state self-esteem turned out to be a mediator in the relationship between positive work events and well-being.

Conclusions: Findings suggest that positive work events indeed are an important source of appreciation at work and can help employees to improve their well-being on an intra-individual basis.

Paper 3: Appreciation at Work as a Longitudinal Predictor of Strain and Commitment Over and Above Other Resources

Désirée Stocker, Nicola Jacobshagen, Simone Liechti, Eva Stettler, Isabel Pfister, Norbert K. Semmer

University of Bern, Bern, Switzerland

Objectives: Management literature praises the relevance of appreciation at work. However, there is only scarce empirical evidence about the specific impact of appreciation at work in comparison with other resources at work. The present study investigates cross-sectional and longitudinal effects of appreciation at work over and above well-known resources at work. Appreciation by supervisors and appreciation by co-workers were separately analysed.

Methods: The study sample consists of 139 employees of two Swiss corporations, nationally operative in retail business and transportation. Participants were between 18 and 61 years old; the average age was 38.44 (SD = 10.42); 43% were male. The average length of service in the company was 15.21 years (SD = 9.44). One hundred and seven respondents (77%) worked full-time and 32 worked part-time. They filled in an online questionnaire twice with a time gap of eight weeks. The recently developed appreciation at work-scale was used to measure appreciation at work by different sources. In order to test for incremental variance explained by appreciation at work, hierarchical regression analyses were ran.

Results: In cross-sectional as well as longitudinal analyses the total scale of appreciation at work contributed significantly to the variance explained in feelings of resentment and affective commitment, over and above the control variables age, sex, and outcome variables at t1 (longitudinal analysis) as well as the three resources job control, social support, and interactional justice. The analysis of the subscales revealed the following patterns: appreciation by supervisors was especially important for predicting strain, whereas appreciation by colleagues was important with regard to the prediction of affective commitment. The appreciation at work-scale showed good psychometric properties.

Conclusion: Our results indicate that appreciation at work is a resource on its own right, even when other resources and the dependent variable on a prior measurement point are controlled for. Furthermore, the slightly different effects of appreciation by supervisors than of appreciation by co-workers corroborate the need to differentiate the providers of resources at work.

Paper 4: Illegitimate Tasks and Recovery: The Mediating Role of Emotions

Rabea Krings¹, Maria Kottwitz³, Eliane Holzer¹, Franziska Tschan², Norbert K. Semmer¹

¹*University of Bern, Bern, Switzerland*, ²*University of Neuchâtel, Neuchâtel, Switzerland*,

³*University of Marburg, Marburg, Germany*

Objectives: Situations that threaten self-esteem have great potential to evoke stress and, therefore, increase the possibility of insufficient recovery. Recently, the concept of illegitimate tasks has been introduced. Those tasks cannot reasonably be expected, because they are

perceived as not conforming to the employee's core role (unreasonably tasks), or as unnecessary; illegitimate tasks therefore should represent a threat to the professional self and they should evoke feelings of unfairness. So, they do not send a message of appreciation. Illegitimate tasks effect emotions: they should induce negative emotions and impair positive emotions. Furthermore illegitimate tasks and emotions should effect recovery. Therefore, we hypothesized that illegitimate tasks lead to less recovery. Furthermore, the relationship between illegitimate tasks and recovery should be mediated by positive and negative emotions.

Methods: The current analyses are based on a 2-wave study conducted with Swiss Surgeons. Data from the first wave is already collected. In the first wave, 88 surgeons participated. Mean age is 37.57, ranging between 24 and 64 years ($SD = 10.74$). 53 surgeons are male (60%). Illegitimate tasks were measured by the Bern Illegitimate Tasks Scale (Semmer et al., 2010). Emotions were measured by a scale from Geurts (1999), asking e.g. for feelings of proud and revenge. Recovery was measured by a scale from Semmer & Grebner (2001). A sample item is „How well can you generally recover after work?“. We used two separated mediated regression analyses, differentiated for positive and negative emotions for testing the mediation. We entered gender, number of children that live at home, position and mean hours of administration as control variables.

Results: Illegitimate tasks predict recovery ($\beta = -.25, p < .05$), as well as do positive ($\beta = .52, p < .001$) and negative emotions ($\beta = -.47, p < .001$). Illegitimate also lead to more negative emotions ($\beta = .45, p < .001$), but had no impact on positive emotions. When we tested the mediation with negative emotions as mediator, illegitimate tasks no longer have an influence on recovery ($\beta = -.05, p = .70$). Therefore, negative emotions completely mediate the relationship between illegitimate tasks and recovery (Sobel: $z = -3.11, p = .001$).

Conclusion: Results show that illegitimate tasks evoke feelings of unfairness and, therefore, influence negative emotions. Furthermore, illegitimate tasks can be seen as a work stressor and thus can impact recovery negatively. Referring to these results it is important to avoid giving illegitimate tasks to employees to protect their well-being.

Paper 5: Appreciation at Work as a Predictor of Well-Being

Isabel B. Pfister, Nicola Jacobshagen, Désirée Stocker, Norbert K. Semmer
University of Bern, Bern, Switzerland

Objectives: The effort-reward model by Siegrist (1996, 2002) postulates that an imbalance between effort invested and rewards received increases the risk of impaired well-being and ill health. Appreciation is seen as one of the reward factors. Empirical evidence indicates that appreciation may be the most important of the rewards (van Vegchel, de Jonge, Bakker, & Schaufeli, 2002). It is, therefore, plausible to assume that appreciation is especially important for well-being. Based on past research three sources of appreciation can be identified: supervisors, colleagues and clients. In the current study we try to identify, if different sources of appreciation at work have different impacts on employees' well-being. Generally, appreciation is embedded in a social context and relates to the evaluation by others (Semmer & Jacobshagen, 2003). To find out the importance of appreciation for well-being, it's important to find out if appreciation explains incremental variance over and above other forms of positive social interaction at work. In the present study we explore if appreciation at work explains incremental variance over and above social support and positive feedback.

Methods: Data were gathered with an online survey of 144 Swiss employees. Participants were between 22 and 64 years old, the average age was 43.78 ($SD = 10.36$), and 44% were male.

Results: Simple regression analyses show that supervisors are the most important source of appreciation at work for employees' well-being. Results of the hierarchical multiple regressions show that appreciation from colleagues or clients does not explain incremental variance in employees' well-being over and above appreciation coming from supervisors. In the second part of our study we explore if appreciation explains incremental variance over and above social support and positive feedback. To do so, we performed a hierarchical multiple regression analysis. Since our first results found incremental validity only for appreciation from supervisors, we therefore put our focused on appreciation, social support and positive feedback coming from supervisors. Results show, that appreciation from supervisors explained incremental variance over and above social support and positive feedback.

Conclusion: These results underline the importance of appreciation by supervisors for employees' well-being and its distinction from other forms of positive social interactions in the work context. Overall, these findings imply that it is worth building an organizational culture based on appreciation at work.

Symposium title: Healthy Workplaces and Healthy Workers: The Impact of Organizational Initiatives

Arla Day

Saint Mary's University, Halifax, Nova Scotia, Canada

A healthy workplace has been defined as one that “maximizes the integration of worker goals for well-being and company objectives for profitability and productivity” (Sauter, Lim, & Murphy; 1996, p. 250). Given this potential impact on organizational effectiveness and employee health, promoting psychologically healthy workplaces has become an increasingly important topic for organizations. Therefore, this symposium focuses on psychologically healthy workplaces through various perspectives, in terms of the workplace components, interventions, and initiatives that contribute to both positive and negative employee outcomes.

The first two presentations address the role of organizations in promoting employee health. In the first presentation, the authors use data from two longitudinal studies to examine the impact of organizational characteristics on employee well-being and burnout over time. In the second presentation, the authors examine the importance of employee recognition on workplace outcomes, in terms of the relationships among employee recognition, skill utilization, and employee engagement.

In the last two presentations, the authors discuss intervention programs designed to improve organizational and employee health. In the third presentation, the authors examine the extent to which employee engagement and motivation affect the ability of a phone-based coaching program (ABLE – Achieving Balance in Life and Employment) to improve employees' recovery experiences. Finally, in the fourth presentation, the authors discuss the practical implications of an automated web-based HealthWatch intervention program in promoting organizational and individual health.

Throughout this symposium, we focus both on the characteristics of healthy workplaces, as well as practical aspects in implementing programs to improve health. As such, we argue that future research must focus both on the individual factors contributing to health and well-being, as well as the organizational factors that can improve employee well-being.

Paper 1: The Effects of Organizational Factors and Healthy Practices on Employee Well-Being, Burnout, and Engagement

Arla Day, Lori Francis, Nikola Hartling

Saint Mary's University, Halifax, Nova Scotia, Canada

Although the concept of a healthy workplace is not new, there has been a continued interest in improving workers' total health through workplace initiatives. The focus on healthy workplaces

has been driven both by research on the negative impact of job stress and unhealthy workplaces on worker health (e.g., Kivimaki et al., 2013) as well as the growing trend of positive psychology. That is, it is important not only to reduce negative workplace characteristics, but also to increase the positive components (Kelloway & Day, 2005). Therefore, we examined the components of workplace in terms of the presence of positive aspects (supportive organization; positive leadership; control) as well as the absence of negative job factors (e.g., work overload). We expected that employee's ratings of workplace components at Time 1 would be associated with their reported strain and well-being four and seven months later.

Method: We examined data from two larger longitudinal intervention studies (N= 104 in Study 1; N=130 in Study 2) involving employees across various organizations in Nova Scotia Canada. A control-wait-list design was used for both studies. The participants were primarily women, and they worked an average of 39.5 hours/week, with approximately 1/3 working and living in rural communities.

Results: Both the positive organizational resources (e.g., transformational leadership; supportive organizations) and negative demands (e.g., overload) were associated with stress, burnout, and engagement. After controlling for the effects of engaging in a coaching-based health program, role overload at Time 1 was the best unique predictor of engagement and burnout four months later, even after controlling for the engagement and burnout at Time 1, respectively. However, the mere presence of workplace 'healthy' programs and initiatives had little impact on employee well-being. In Study 1, after controlling for the effects of engaging in the coaching program, employees who reported having a healthy workplace tended to have higher engagement and lower burnout: These effects remained even after controlling for negative affectivity and Time 1 engagement and burnout.

Discussion: The data suggest that the presences of organizational initiatives are not sufficient to improve employee well-being, and the basic issues of work overload may override any positive impacts of organizational resources. That is, 'fixing the problems' still need to be addressed even when developing healthy workplace initiatives. Future research should identify the factors integral to moving organizations beyond such remedial responses for a more responsive type of healthy workplace.

Paper 2: The importance of employee engagement in workplace interventions

Samantha Penney, Arla Day

Saint Mary's University, Halifax, Nova Scotia, Canada

Objectives: Stressful work experiences are associated with poor psychological well-being and with increased health problems (Sonnetag & Frese, 2003). In order to reduce job stress and strain, recovery experiences outside of work are essential in order to restore individual well-being and resources (Geurts & Sonnetag, 2006; Sonnetag & Bayer, 2005). Previous research has demonstrated that interventions may be able to increase recovery experiences (e.g., Hahn, Binnewies, Sonnetag, & Mojza, 2011; MacDonald, 2012; Stevens, 2011). However, little research has examined the organizational and individual factors that influence the extent to which employees partake in recovery experiences. Therefore, we will examine the extent to which a phone-based coaching program (Achieving Balance in Life and Employment; ABLE) is associated with increased recovery experiences. A major factor in any behavioural change process is employee engagement in the intervention, such that higher engagement would be associated with higher recovery experiences.

Methods: A total of 139 participants were recruited from a working sample of participants partaking in a larger coaching program (Achieving Balance in Life and Employment; ABLE). The ABLE program is a 10-week, waitlist-control, individualized phone-based program in which participants received weekly coaching on improving stress reduction, physical and mental health, and work-life balance. Participants completed surveys at four time points that included measures of stress (Depression Anxiety Stress Scales; Lovibond & Lovibond, 1995)

and recovery (i.e., Recovery Experience Questionnaire – Expanded; Stevens, 2011). ABLE coaches rated the extent to which the employees were engaged in the program and how motivated they were to achieve their goals.

Results: Preliminary ABLE data analyses suggest that coaches' ratings of employee engagement in the program were related to employee outcomes, such that employees who were rated as being more engaged in the program also experience more positive outcomes (e.g., increased recovery experiences) and reduced stress and strain.

Implications: The current research extends past research by examining the impact of an employee's engagement in a job stress and work-life balance intervention program on their recovery experiences and stress. Furthermore, it demonstrates the importance of employee engagement and motivation in intervention programs.

Paper 3: Engaging your Employees: The Power of Recognition

Jennifer Dimoff, Kevin Kelloway, Laure Pitfield
Saint Mary's University, Halifax, Nova Scotia, Canada

Although a great deal of research has been conducted on employee recognition, there is a dearth of research documenting the process by which employee recognition impacts workplace outcomes. Given that recognition is integral to the development and maintenance of psychologically healthy workplaces, it is important for both researchers and practitioners to better understand the processes by which effective recognition is developed and the impacts that it can have on individuals and the workplace.

We conducted a survey-based study at a Canadian university with the goal of better understanding the relationships between skill-use, recognition, and engagement among employees. Participants were asked to respond to an online questionnaire inquiring about their skill-utilization at work, the personal recognition that they receive at work, and their level of engagement. Skill-use at work was measured using four items; recognition was measured using six items; engagement was measured using 16 items which measured three work-related indicators: passion for the job, commitment to the organization, and relationships with other employees.

Data from university employees ($N = 692$) was analyzed through mixed, multi-level regression using engagement as the outcome, and skill use and recognition as predictors.

Findings from the regression analysis indicate that recognition and skill-use significantly predict employee engagement. Moreover, the significant interaction between skill use and recognition suggest that recognition partially mediates the effect of skill-use on engagement, such that the relationship between skill use and engagement is strengthened when employees are recognized and appreciated at work. Employees who experienced high levels of recognition experienced higher levels of engagement, regardless of skill use; employees with high skill use and high recognition displayed the highest level of engagement, while employees with low skill utilization and low recognition reported the lowest relative levels of engagement. Not only do these findings lend greater insight into the relationships between employee recognition, skill-use, and engagement, but they also emphasize the need to better explore the workplace antecedents and outcomes of employee recognition.

Paper 4: Workplace Intervention & Health

Karin Villaume¹, Dan Hasson²

¹*Karolinska Institutet, Stockholm, Sweden*, ²*Stress Research Institute, Stockholm, Sweden*

Healthy organizations are proactive and focus systematically on interventions for health promotion and a sustainable work environment. They have concrete tools for employees,

managers, and management to proactively and reactively promote and monitor a good and sustainable psychosocial and physical work environment. The workplace should be adaptive to the needs of the employees and vice versa. It is also important to plan for today and tomorrow and prioritize long-term benefits and sustainable solutions.

This presentation describes the HealthWatch tool for systematic organizational health promotion. HealthWatch is a completely automated web-based intervention for systematic organizational and individual health promotion. It is proactive for promoting health and a sustainable work environment and it includes real-time monitoring and instant feedback for continuous health promotion and a sustainable work environment. It includes early warning systems in order to proactively counteract ill health and dysfunctional group patterns at an early stage. The system also provides means of promoting organizational learning by emphasizing success factors in organizational health development.

In practice, the employees receive self-help tools and can access the system at optional frequency. Managers monitor group level feedback and are provided with leadership and management tools. The management/human resources department monitors the health and psychosocial work environment of the whole organization and may intervene by offering support and expertise to the managers when needed. HealthWatch is adaptive to the needs of the organization and its employees and it is user driven. There are documented beneficial effects on psychological measures and biomarkers.

We describe the importance of targeting all levels of the organization as well as the systematic implementation process when introducing this intervention for health promotion and a sustainable work environment.

Symposium title: Psychosocial Safety Climate: Innovation in Multilevel Work Stress Theory and Practice

Maureen Dollard¹, Christian Dormann^{1,2}

¹Centre for Applied Psychological Research, University of South Australia, Adelaide, Australia,

²University of Mainz, Mainz, Germany

For decades work stress theories have helped us to understand the sources of work stress. To explicate why workers become depressed or exhausted, or even engaged, most work stress theories have focused on the way jobs are designed. Yet little attention has been given to the origins of job design and how elements of the organizational context shape job design. Consequently, the Psychosocial Safety Climate (PSC) emerges as an important organizational contextual factor. Understanding an organization's PSC helps us to appreciate the organization's values and philosophies concerning worker health and well-being. Organizations characterised by high levels of PSC, likely evolve jobs that are designed so that demands are manageable, and resources are adequate to handle job demands.

In this symposium we set out to show how PSC is an innovation in OHP and use a range of advanced methods (longitudinal designs, multilevel models, international comparisons, benchmarking) to show how PSC operates to influence job design, hazardous behaviours, health and safety outcomes.

The first study uses a multilevel framework, and explores the relationship between PSC and important safety outcomes (near-miss accidents, safety accidents, and incidents causing psychological) in front line health care workers. Testing the generalizability of PSC theory in an Eastern and emerging economy, the next study uses longitudinal data and tests a multilevel model across Malaysian organizations. PSC is confirmed as an upstream factor that influences emotional demands, emotional exhaustion and in turn depression across a 3 month time lag.

The third study explains that since PSC establishes what is tolerated in relation to psychosocial risk factors, PSC could precede hazardous workplace behaviours such as violence and bullying. Along with physical demands, these factors are considered in the aetiology of musculoskeletal disorders (MSD). In the final study, PSC is put to a benchmarking test. What level of PSC should we consider a low risk for employee depression and job strain? Benchmarks are established for PSC, for use by industries, organizations, and regulatory agencies to encourage workplaces at low risk of psychological harm.

Paper 1: The Dynamic Role of Psychosocial Safety Climate in Frontline Healthcare Workplaces

Amy Zadow¹, Maureen Dollard¹, Michelle Tuckey¹, Peter Chen²

¹*Centre for Applied Psychological Research, University of South Australia, Adelaide, Australia,*

²*International Graduate School Of Business, University of South Australia, Adelaide, Australia*

We extended a model of psychosocial safety climate (PSC) to explain the origins of workplace safety performance (near misses, accidents and injuries) in the frontline health care workplaces. PSC refers to policies, practices and procedures for the protection of worker psychological health and safety. Using the job demands-resources framework, we hypothesized that PSC would precede work conditions (demands and resources) and would in turn predict psychological health and levels of accidents and injuries. We operationalized PSC at the work group level using hierarchical linear modelling in a sample of frontline healthcare workers with 30 workgroups composed of at least 10 employees (N = 300).

The multilevel study examines if PSC predicts change in individual psychological health problems (emotional exhaustion and engagement), safety engagement, and safety performance (near-miss accidents, physical safety accidents, and incidents causing psychological or emotional harm) through its relationship with individual job demands (work pressure, physical demands, and emotional demands). Moreover the moderating role of PSC on the relationship between emotional demands with emotional exhaustion is also explored. Results are expected to support a multi-level model of PSC as a lead indicator of workplace demands and resources, psychological health, and near-miss accidents, physical safety accidents, and incidents causing psychological or emotional harm. The PSC construct is an effective intervention point to improve workplace safety performance.

Paper 2: Psychosocial Safety Climate, Emotional Demands, Burnout and Depression: A Longitudinal Multilevel Study in the Malaysian Private Sector

Awang Idris¹, Maureen Dollard²

¹*University Malaya, Kuala Lumpur, Malaysia,* ²*University of South Australia, Adelaide, Australia*

This multilevel longitudinal study investigates a newly identified climate construct, psychosocial safety climate (PSC), as a precursor to job characteristics (e.g. emotional demands), emotional exhaustion and depression. We argue that PSC, as an organizational climate construct has cross-level effects on job design and individual psychological outcomes. We hypothesized a mediation process between PSC and emotional exhaustion particularly through emotional demands. In sequence, we predicted that emotional exhaustion mediated the relationship between emotional demands and depression. At Time 1, data were collected from employees in 36 Malaysian private sector organizations (80% responses rate), N = 253 (56%), and at Time 2 from 27 organizations (60%) and N = 117 (46%).

Using hierarchical linear modelling (HLM), we found that there were cross-level effects of PSC Time 1 on Time 2 emotional demands and emotional exhaustion, but not depression across a 3 month time lag. We also found that emotional demands mediated the relationship between PSC and emotional exhaustion, with knock on effects to depression. Our results suggest that PSC is an important organizational climate construct, and acts to reduce employee psychological problems in the workplace, via working conditions.

Paper 3: Psychosocial Safety Climate, Violence, Bullying, and Physical Demands in the Aetiology of MSDs and Workers' Compensation

Tessa Bailey, Penelope Richards, Sarven McLinton, Maureen Dollard

Centre for Applied Psychological Research, University of South Australia, Adelaide, Australia

Causal agents for the majority of workers compensation claims have largely been identified as physical demands, and associated physical health problems. Here we proposed that psychosocial factors (psychosocial safety climate, perceptions about the organization's climate for psychological health, and workplace violence and bullying) may add to physical demands and lead to musculoskeletal disorders (MSDs) and, in turn, workers' compensation claims.

The purpose of this study was twofold; (1) to test PSC as a lead indicator of physical health related workers' compensation via MSDs; and (2) to investigate the role of psychosocial risk factors in the emergence of MSD. A random population based sample of 1097 Australian workers drawn from the Australian Workplace Barometer project completed a telephone interview on two occasions 12 months apart. We found that Time 1 psychosocial safety climate was indirectly related to workers compensation claims at Time 2 controlling for baseline compensation levels. This indirect effect was via the influence of PSC on Time 1 violence/bullying and in turn Time 1 MSDs. These psychosocial effects were over and above the influence of physical demands on Time 1 MSDs and Time 1 workers' compensation. OHS legislators and policy makers should be aware of PSC, its effect on risk factors such as violence/bullying, and their musculoskeletal effects, that contribute to worker compensation injury claims.

Paper 4: National and International Standards for Psychosocial Safety Climate

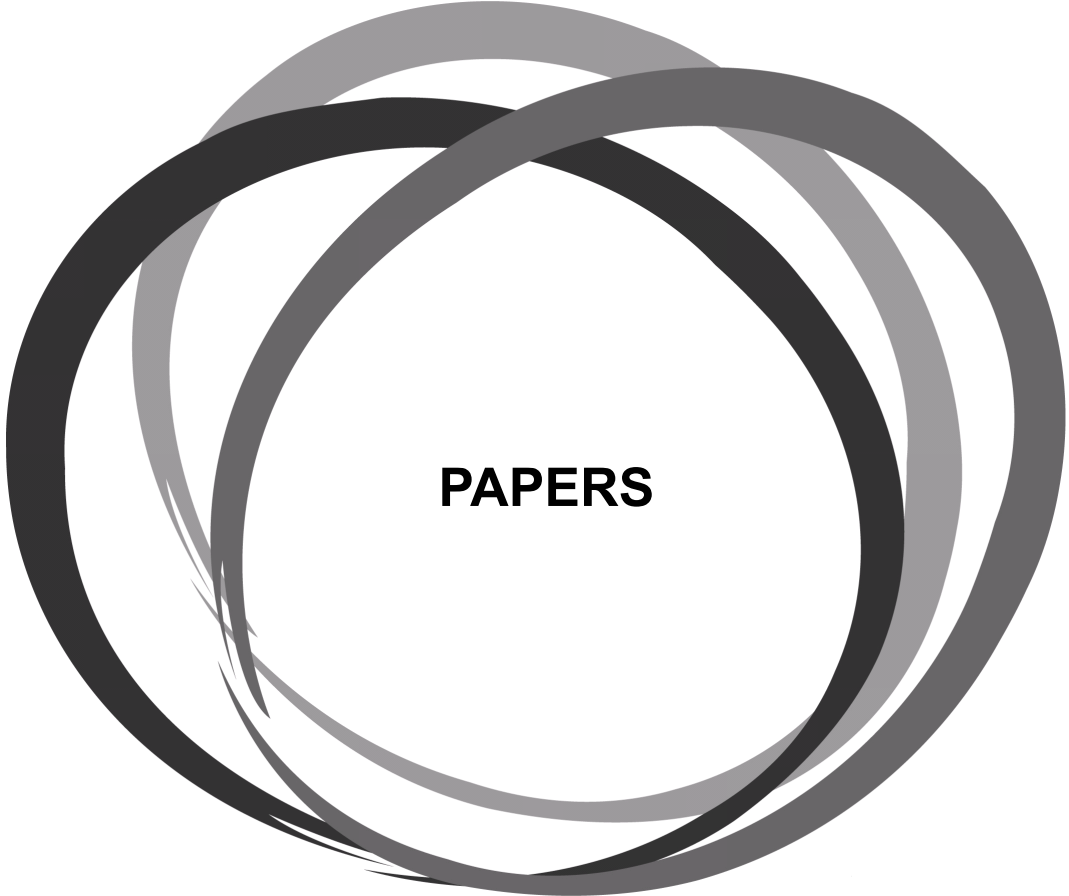
Maureen Dollard, Tessa Bailey, Penelope Richards

Centre for Applied Psychological Research, University of South Australia, Adelaide, Australia

Despite decades of research from around the world now permeating occupational health and safety (OHS) legislation and guidelines there remains a lack of practical tools to assist employers and OHS practitioners with evidence-based risk assessment. Our main research goal is to establish benchmarks for a leading indicator of psychosocial risk, employee health and productivity, i.e., Psychosocial Safety Climate (PSC). This study involves over 3000 Australian employees from a diverse range of occupations and industries participating in the Australian Workplace Barometer. Results show that PSC negatively predicted with new depression through its relationship with job strain (i.e. high demands, low control), confirming PSC as a leading indicator of psychosocial risk factors. Benchmarks for PSC (range 12 – 60) were determined corresponding to low (41 or above), moderate (37 to 40.99), and high (36.99 or below), risk of employee job strain and depression. These were cross validated using three separate samples. PSC benchmarks provide a national standard which organizations and regulatory agencies can utilise to encourage safe working environments at low risk of psychological harm.

National standards imply international differences in levels of PSC that may be created by organization and macro-level forces. International benchmarking in 31 European countries using alternative measures of PSC reveals a national worker health productivity model whereby macro-market power factors (i.e. union density), influence PSC, and in turn national worker health and GDP.

A multi-level PSC hierarchy of control model is discussed to provide employers and OHS practitioners with practical means to improve PSC and, thus, reduce psychosocial risk and improve productivity and employee health outcomes in the workplace.



PAPERS

Differentiation of self in the workplace and its relation to work stress and work satisfaction

Alan Cavaola, Callandra Peters

Monmouth University, W. Long Branch, New Jersey, USA

This study investigates the relation of differentiation of self in the workplace to work stress and work satisfaction among individuals working in various employment settings (e.g. corporate, government, educational, medical, N=567). Differentiation as defined by family theorist, Murray Bowen encompasses one's ability to attain a mature balance between autonomy and intimacy within relationships. The purpose of this study was to determine if better levels of differentiation would translate into better workplace relationships which would then result in greater job satisfaction and lower perceived stress levels. Differentiation of self was assessed using the emotional reactivity, emotional cut-off, and fusion subscales of the Differentiation of Self Inventory (DES) (Skowron & Friedlander, 1998) and the Workplace Differentiation Inventory (WDI) developed by the authors for purposes of assessing differentiation in the workplace.

As hypothesized, participants who scored as being more highly differentiated on both the DES and WDI measures reported greater overall job satisfaction and lower interpersonal stress. Significant positive correlations were found between the subscales of the Differentiation of Self Inventory and the Workplace Differentiation Inventory, which suggests that workers tend to respond to interpersonal workplace situations in ways similar to non-work related interpersonal relationships. Significant gender differences were found with women reporting more emotional reactivity and fusion than men. These results are discussed in light of Bowen's theory of differentiation.

Perceived occupational stress, job performance, social support, intention to stay and staff recognition among expatriate nurses working in a culturally diverse setting in the Kingdom of Saudi Arabia

Hussam Alnusair^{1,2}, Stavroula Leka¹, Sheila Greatrex-White¹

¹*University of Nottingham, UK*, ²*Sultan Bin Abdulaziz Humanitarian City, Riyadh, Saudi Arabia*

Occupational stress is one of the main factors that have a great impact on the functionality of any organization, in particular among expatriate nurses. It is well documented that there is a negative relationship between: perceived stress and job performance, stress and staff intention to remain in their job, decreased staff recognition and stress level, and decreased social support and stress. Creating a positive working environment, will in turn enhance staff performance and consequently improve the quality of patient care provided. There have been no studies conducted in the Kingdom of Saudi Arabia (KSA) which considered occupational stress among expatriate nurses, an important area for investigation as the KSA has a unique working environment regarding expatriate nurses.

The study used a mixed methodology approach. A qualitative element was used to measure perceived stress level, perceived job performance, intention to stay at the job, and social support from work colleagues and study the relationships of these variable. At the same time the qualitative approach sought to understand how staff perceived occupational stress, staff intention to stay, staff recognition strategies and social support among nursing staff in a culturally diverse setting in the KSA. The study used a correlational descriptive survey design.

Quantitative data was collected using a structured questionnaire that was posted on the unit, which included a form explaining the purpose and data collection procedure for the study, invitation letter, the Expanded Nursing Stress Scale (French et al, 2000), the modified version of the Schwirian Six Dimension Scale (Schwirian, 1978), McCain Behavioural Commitment Scale (McClosky, 1990), Nurse Supervisor Behaviours Scale (Belgen et al; 1992), McCain and Marklin Social Integration Scale (McCloskey, 1990) and the demographic form. The qualitative data were collected using semi structured interviews which were audio-recorded.

The study sample consisted of nursing staff working at Sultan Bin Abdulaziz Humanitarian City (SBAHC) (n=321). Interviews were conducted for 20 staff, and the questionnaire was distributed for 321 nursing staff. Demographic data was analysed using descriptive statistics. Quantitative data was analysed using Social Package Sciences System (SPSS) version 16 for Windows by running an Analysis of Variance (ANOVA) and post-hoc analyses. Thematic analysis was used to explore the qualitative data. The findings of this research contribute to the knowledge of occupational stress and its management in a culturally diverse setting.

Evaluating the effectiveness of enhancing resilience in Human Service professionals using a retreat-based mindfulness with metta training program: A randomised control trial

Aileen Pidgeon¹, Lucas Ford²

¹*Bond University, ROBINA, QLD, Australia,* ²*Mercy Family Services, TOOWOOMBA, QLD, Australia*

This paper explores the feasibility of a brief Mindfulness with Metta Training Program (MMTP), targeting the enhancement of mindfulness and self-compassion in a retreat format, as a means of increasing resilience in human services professionals. In this randomised control trial, 44 human services professionals were randomly allocated either to a MMTP retreat group or to a control group. Following the MMTP intervention, no significant differences between the retreat and control groups were found on resilience, mindfulness and self-compassion variables. However, significant improvements were observed over time for the retreat group for mindfulness and self-compassion at one and four months and for resilience at four-months post MMTP intervention. The results of this pilot study show that MMTP in a retreat format is a promising method of increasing resilience, mindfulness and self-compassion in human services professionals.

Job strain, cognitive decline, and APOE4 genotype: A prospective study of the Framingham offspring

Wilfred Agbenyikey, Robert Karasek

University of Massachusetts, Lowell, USA

Introduction: Although the association of job strain and diseases has been related to a number of health outcomes, little or no work has been done on studying its association with cognitive function or decline (a precursor of dementia). Chronic psychosocial stress has been suspected to be contributing to the severity, or is risk factor of various neuropsychiatric ailments. Considering steady increase of stress at the American workplace and the increasing incidence of dementia, investigating the possible association between occupational psychosocial stress and cognitive decline is warranted. This study assessed the effect of chronic exposure to psychosocial stressors, measured as high job strain and its components (control and demand), in the work environment and a 20-year risk of cognitive decline in the Framingham heart study offspring cohort.

Method: A total of 1,429 participant who participated in the job strain questionnaire at baseline and had no dementia or stroke or other neurodegenerative diseases at the beginning of the first neuropsychological battery test (logical memory recall, visual reproduction recall and trail making tests), and also participated in the second neuropsychological battery test 5 years after the first battery test were used for the study. Multivariate regression was implemented to study the association of high job strain with the longitudinal change in the components of the neuropsychological battery test components.

Results: High job strain was associated with decline in leaning (paired associate learning, PA-TS immediate, score; -0.15 ± 0.06 $p = 0.006$, PA-TS delayed score; -0.05 ± 0.02 $p = 0.04$), premorbid intelligence (wide range achievement test, WRAT, score; -0.10 ± 0.05 $p = 0.03$) 2 decades later. SIMILARITIES test however, improves with increase in Job strain. High job demand was associated with a decrease in PA-TS immediate score but positively associated

with score in SIMILARITIES. Decrease in job control was associated with a decrease in score of both PA-TS immediate and PA-TS delayed. Younger age group (below 65 years at first neuropsychological battery test) had stronger associations with measures of cognitive decline than older age group (above 65 years). Significant interactions were also found between apoE4 Genotype and job strain and its components on their effects on some measures on cognitive decline.

Conclusion: From the Framingham Heart Study offspring cohort, exposure to chronic psychosocial stress is associated with some neuropsychological tests of cognitive decline.

Economic globalization trends and the global distribution of awareness of psychosocial workplace stressors: Policy implications and recommendations for least developed countries

Wilfred Agbenyikey, Robert Karasek
University of Massachusetts, Lowell, USA

Introduction: This study examines whether the awareness of workplace psychosocial stressors has been concurrent with the influx of economic globalization into least developed countries from the period of 1980 to 2010. Workplace psychosocial stressors, an inadvertent outcome of unwholesome work organizational design and practices being propagated by economic globalization and industrialization across the world, is catching up on and transforming the work environments of the least developed countries. It is however suspected that the awareness of the unhealthy psychosocial and organizational that this industrialization brings is lagging.

Method: This study explores in the form of trend analysis (a) the ratio of published studies on workplace psychosocial stressors and foreign direct investments, and (b) the ratio of use of the Job Content Questionnaire and foreign direct investments (FDI) inflow, in developed countries, newly industrialized countries and developing countries (as categorised by The United Nations Conference on Trade and Development) over a 20-year period in an effort to examine the contemporary trends economic globalization and awareness of workplace stressors.

Results: Results from a) Correlation on cumulative information for a 5 year interval for the ratio of awareness of workplace psychosocial stressors and foreign direct investment inflow score for three bock of countries (developing countries, newly industrialized countries and developed countries) using the ratio of ProQuest literature search and FDI as awareness and b) similar correlation using the ratio of Users of JCQ and FDI showed a lag or lower awareness of workplace psychosocial stressors in the developing countries.

Conclusion: The study concluded that awareness to workplace psychosocial stressors in the least developed countries is low. However, least developed countries are at an advantage of not repeating the mistakes of the developed countries and the newly developing countries of not incorporating healthy work organizational practices in their industrialization. Recommendations for incorporating health workplace practices were provided.

Occupational sitting time and its association with work engagement and job demand-control

Fehmidah Munir¹, Jonathan Houdmont², Stacy Clemes¹, Kelly Wilson³, Robert Kerr³, Ken Addley⁴

¹*Loughborough University, Leicestershire, UK*, ²*University of Nottingham, Nottinghamshire, UK*, ³*University of Ulster, Belfast, UK*, ⁴*Northern Ireland Civil Service, Belfast, UK*

Background: Research suggests that high sedentary behaviour ('sitting time') has significant deleterious effects on cardio-metabolic and musculoskeletal health, independent of moderate-to-vigorous physical activity. Adults average about 60% of their waking time and 70-80% of their working time sedentary. Epidemiological and occupational health research provides

support that reducing sitting behaviour and promoting standing and light movement enhances health and wellbeing. However, studies have yet to examine the relationship between occupational sitting and work performance. As a first step to understanding the relationship between occupational sitting and work performance, this study examined whether occupational sitting time was associated with work engagement and job demands.

Method: Survey data was analysed from the 2012 STORMONT cohort study. This is a new study tracking a large cohort of employees through and beyond their career with the Northern Ireland Civil Service. 5,235 office-based employees participated in the first wave of data collection focusing on self-report health, wellbeing and working conditions. For this study, individual data on measures of occupational sitting, work engagement and job demands (Management Standards Indicator Tool) were extracted. Occupational sitting time was categorised into Tertiles of low (0-360 minutes), moderate (361-420 minutes) and high sitting time (421-720 minutes). Separate constructs of work engagement were also categorised into Tertiles of low, medium and high work engagement. For job demands, ratios were calculated for high strain, low strain, active jobs and passive jobs. Logistic regression was used to examine the association between moderate occupational sitting time (against low occupational sitting time) and the selected variables, and high occupational sitting time (against low occupational sitting time) and same variables, controlling for age, BMI, physical activity and occupational group. Data were analysed separately for men and women.

Results: For men, those who did not meet physical activity guidelines, were smokers, reported low vigour, low dedication, high job strain and passive jobs were more likely to have high occupational sitting times than low occupational sitting times. After controlling for occupational group, only low vigour remained significant. For women, those with low vigour and high absorption were more likely to have high occupational sitting times. After entering control variables into the model, no findings remained significant.

Conclusions: The findings suggest that high sitting times are associated with negative work outcomes. This study adds to the sparse literature on occupational sitting time and work performance.

A bunch of stress – On the relationship between supervisors’ transformational leadership behaviour and followers’ hair cortisol levels

Mathias Diebig

TU Dortmund University, Dortmund, Germany

Work stress is an increasing phenomenon in modern society. The resulting negative consequences of chronic work stress produce high costs for healthcare systems and business companies. Accordingly, practitioners and researchers are increasingly eager to understand the interrelationship between work stress and its antecedents. This present study focuses on the role of immediate supervisors’ leadership behaviour, in particular transformational leadership, on employees’ perception of work stress. Depending on the leader behaviour work stress can either be magnified or mitigated. Traditionally work stress is frequently assessed using subjective self-descriptions. This study applies objective physiological criteria for the assessment of work stress. Cortisol is the key biomarker of stress in the human body, which represents the activity of the hypothalamic-pituitary-adrenal (HPA) axis. The connection between stressful situations - physical or psychological - and cortisol release is well established. Cortisol is usually measured via saliva, blood plasma or urine. However, these methods merely capture short term stress. The assessment of cortisol in hair provides a promising method to retrospectively display the cortisol concentration of several months depending on the length of the hair which is assessed.

The sample consists of 100 employees who took part in this study on two measurement points. Participants provided information on transformational leadership and subjective work stress. Three weeks later, a hair sample and again information on subjective stress along with

potential confounding variables regarding the cortisol assessment were collected. Data will be analysed using linear regression techniques and latent state-trait modelling to overcome the common problem of lack of psycho-endocrine covariance.

Preliminary results show significant negative correlations between four facets of transformational leadership with subjective work stress and hair cortisol. This study strengthens the relevance of supervisors' behaviour on employees' subjective and objective work stress. The results will be discussed in the context of leadership research and work stress theory and implications for future research will be provided.

The impact of 'Organizational Rhythmics': Strengthening of the involvement of employees and managers in change processes

Truus Poels, Joop Kielema, John Klein Hesselink

¹*Universiteit van Amsterdam, Amsterdam, The Netherlands,* ²*TNO, Hoofddorp, The Netherlands*

The success of organizational change has been related to the 'model of organizational rhythmics'. The degree of success of a change depends on the involvement of the employees and managers. The involvement of employees and managers with change processes can be strengthened with the new and innovative 'model of organizational rhythmics' (by using an analysis of the rhythmics characteristics with the Questionnaire Organizational Rhythmics and based on that, the formulation of suggestions for improvement). This involvement is of great importance. The involvement obtained by filling in the rhythmics characteristics (being the underlying mechanisms of change in the organization, such as working with a schedule, delays, moments of communication) is a new factor for successful change. The importance of organizational rhythmics for organizational change processes is illustrated by describing the relationship between rhythmics characteristics and successful change.

For 950 participants (N=950) a 0-measurement and a final measurement by a digital questionnaire were developed and used. The results of the measurements interventions were explored for ten cases of organizational change. The measurements of the rhythmics characteristics before and after a change process show that the rhythmics parameters react sensitively to specific organizational change processes. This allows the individual outcomes for rhythmics characteristics to be captured relatively uniquely.

Organizational rhythmics is a new factor to successfully change organizations. In every change process there are two rhythms: the rhythmics of the organization and the rhythmics of the change process. Examples of rhythmics in organizations are the effects of the seasons, sales ups and downs, and recurring holiday periods, such as a Christmas break. In a change process, the characteristics of rhythmics of organizational change are, for example, the announcement and communication moments at the start of a project (rhythmics characteristic 'intonation'). During the change process, repetitions of the communication of the objective clarity on moments of expected involvement and action moments for the participants (rhythmics characteristic 'frequency') are necessary elements.

The study shows that organizations have different scores concerning the rhythmics characteristics. The study indicates that organizations have different rhythms and that it is possible to manage the various rhythmics characteristics. Also, the study shows that the rhythmics of an organization in general differs from the rhythmics of the specific change. This shows that suggestions for improvement can be done to connect the rhythmics characteristics in the organizational process to the rhythmics characteristics of the organizational change process.

Workplace stress and insufficient physical activity: Prospective evidence from a Large cohort study

Anne Kouyonen^{1,2}, Jussi Vahtera^{3,4}, Tuula Oksanen³, Jaana Pentti³, Ari Väänänen³, Tarja Heponiemi⁵, Paula Salo^{3,6}, Marianna Virtanen³, Mika Kivimäki^{7,8}

¹*School of Sociology, Social Policy and Social Work, Queen's University Belfast, Belfast, UK,* ²*UKCRC Centre of Excellence for Public Health (NI), Queen's University Belfast, Belfast, UK,* ³*Finnish Institute of Occupational Health, Helsinki and Turku, Finland,* ⁴*Department of Public Health, University of Turku and Turku University Hospital, Turku, Finland,* ⁵*National Institute for Health and Welfare, Helsinki, Finland,* ⁶*Department of Psychology, University of Turku, Turku, Finland,* ⁷*Department of Epidemiology and Public Health, UCL, London, UK,* ⁸*Institute of Behavioral Sciences, University of Helsinki, Helsinki, Finland*

Background: Workplace stress may contribute to low physical activity in working populations but the evidence is mixed and the assessment of workplace stress has typically been based on a measurement at a single time point.

Aim: The aim of this study was to examine whether exposure to workplace stress predicts changes in physical activity and increases the risk of insufficient physical activity.

Methods: Prospective data were derived from the Finnish Public Sector Study, which is an ongoing cohort study of employees in the service of 10 municipalities and 21 hospitals in Finland. Multiple workplace stressors based on two leading models of work stress (the Demand-control model and the Effort-reward imbalance model) were measured. Repeated exposure to low job control, high job demands, low effort, low rewards, and compositions of them (job strain and effort-reward imbalance) were assessed at Time 1 (2000-02) and Time 2 (2004). Insufficient physical activity (<14 MET hours per week) was measured at Time 1 and Time 3 (2008). Fixed-effects (within-subject) models ($N=6,665$) and logistic regression analysis ($N=13,976$) were applied.

Results: In the fixed-effect analysis an increase in workplace stress – indicated by low job control, high job strain and low effort - was associated with a slight increase in physical inactivity within an individual. In between-subjects analysis, employees with repeated exposure to low job control and low rewards were more likely to be insufficiently active at follow-up than those with no reports of these stressors; fully adjusted odds ratios ranged from 1.11 (95%CI=1.00-1.24) to 1.21 (95% CI=1.05-1.39).

Conclusions: An increase in workplace stressors is associated with an increase in insufficient physical activity within an individual. In addition, there is a weak dose-response association between repeated exposure to workplace stressors and the risk of subsequent insufficient physical activity. Interventions to support physical activity among stressed employees might prevent some of the adverse health effects of workplace stress.

Academic staff burnout: Identification, prevention and management

John Hamilton

Leeds Metropolitan University, Leeds, West Yorkshire, UK

Objectives: Much academic and practitioner focus in recent years has been on identifying and managing causes of work-related stress. However less attention has been given to the impact that burnout has on certain professions, particularly those that involve significant commitment of emotional energy such as healthcare, teaching and academia. This practitioner-lead project examined issues of burnout in academic staff working in higher education with the aim of developing processes and tools to (i) identify staff at risk of burnout, (ii) identify work issues that contribute to burnout, (iii) prevent harm to health through burnout, and (iv) effectively manage individual cases of burnout.

Method: The project was undertaken at Leeds Metropolitan University and followed on from the Institution's established approach to managing work-related stress (Bell, 2012). Following anecdotal concerns from academic staff, a cross-institutional working group was established to examine burnout from the perspective of the individual's emotional attachment to their job and working environment thereby positioning burnout as an individual trait within a work context (Maslach et al., 2001). The team developed a model that integrated the HSE Management Standards for Work-related Stress (Mackay et al., 2004) with six work-related factors that are thought to lead to burnout (Maslach & Leiter, 1997). This model provided a framework for the collection and analysis of survey data from the Institution's academic and non-academic staff that identified staff at risk, and identified the unique set of work factors that were contributing to academic staff burnout. This data then assisted the team to develop new and amended organizational development and occupational health interventions for individuals' suffering from the effects of burnout, as well as modify existing risk assessment and case management procedures. The implementation process was supported by training for occupational health and HR practitioners and reflected in existing occupational health referral training for managers.

Results: This project developed a range of organizational and individual interventions for burnout that includes risk identification tools such as employee surveys, preventative strategies such as team-based risk assessments, and risk management tools such as mentoring and coaching programmes.

Conclusions: This project has highlighted the benefit of considering a wider approach to identifying and managing causes of work-related ill health, in this case the specific vulnerability that academic staff working in higher education have to burnout. The benefit is the subsequent development of tools and process to better identify, prevent and manage cases of burnout.

Time lost versus frequency measures of absenteeism: Does one really reflect health and the other work attitudes?

Gary Johns, Raghid Al Hajj

Concordia University, Montreal, Canada

For 70 years it has been assumed by researchers that total time lost measures of absenteeism better reflect involuntary causes such as ill health, stress, and burnout, while frequency measures are more sensitive to voluntary causes having to do with work attitudes and motivation. We employed meta-analytic techniques to examine the relative reliability of frequency and time lost, as well as the discriminability of the two measures. In addition, we examined the differential criterion related validity of the measures as they pertain to attitudinal and motivational versus health variables. The two measures exhibit very similar reliabilities, and correcting for sample size and unreliability, their association with each other approaches unity. In addition, existing meta-analyses tend to refute differential criterion related validity. That is, frequency is not more strongly associated with attitudinal, motivational, or work experience variables, and time lost is not more strongly associated with health, stress, or burnout.

Our results suggest that most existing meta-analyses have considerably under-corrected for unreliability in absenteeism, and we provide state-of-the-art estimates of reliability to redress this problem. The results also cast doubt on the practice of using attendance management "trigger points" based on the frequent voluntary premise. These factor frequency into attendance monitoring and associated discipline so as to discourage short-term absenteeism, assumed to be volitional. Trigger points have been implicated in coercing presenteeism and can have the unintended effect of discouraging absent workers from returning to work promptly for fear that they will have a medical relapse and incur another instance of absence. We conclude that the purported distinction between absence time lost and frequency is a research urban legend.

Quality of work life among obstetric nurses in urban ortheastern Ontario: A population-based cross-sectional study

Behdin Nowrouzi^{1,2}, Nancy Lightfoot^{1,2}, Lorraine Carter³, Michel Lariviere^{1,2}, Ellen Rukholm^{1,4}, Robert Schinke¹, Diane Belanger-Gardner⁵

¹*Laurentian University, Sudbury, Canada,* ²*Northern Ontario School of Medicine, Sudbury, Canada,* ³*Nipissing University, North Bay, Canada,* ⁴*Centre for Rural and Northern Health Research, Sudbury, Canada,* ⁵*Health Sciences North, SUdbury, Canada*

Objective: This study examined the quality of work life (QWL) of Registered Nurses working in four small urban hospital-based obstetric programs. At one of the four hospitals, the nurses were cross trained to work in all aspects of obstetrical care, while, at the other locations, the nurses were not cross trained and worked in one specific area of obstetric care.

Methods: This mixed methods population-based study was conducted in 2012 in four urban hospitals, in Sudbury, North Bay, Sault Ste. Marie, and Timmins, in Northeastern Ontario. A stratified random sample of registered nurses (n=111) selected from the 138 eligible registered nurses (80.4%) of staff in the labour, delivery, recovery, and postpartum areas at the four hospitals participated. Data were collected by questionnaire, which included the Nursing Stress Scale and the Work-Related Quality of Life Scale, and in semi-structured interviews. Logistic regression analyses were used to consider QWL in relation to the following: 1) demographic factors, and 2) stress, job, and career satisfaction; educational attainment. The semi-structured interviews (n=6) were used to investigate location of cross-training, QWL, and stress in greater depth.

Results: In the logistic regression model, the odds of a higher quality of work life for nurses who were cross trained were estimated to be 3.82 (OR: 3.82, 95% CI, 1.01 to 14.5) times the odds of a higher quality of work life for nurses who were not cross trained. The five key themes that emerged from the semi-structured qualitative interviews were: workplace stress, relationships with colleagues, changes in care delivery and model of care, demands for resources, and QWL.

Conclusions: Given the cross-sectional design of the study that utilized prevalent data and the non-rarity of outcomes, multivariable odds ratio estimates may be overestimated in this study. This study highlights an important relationship between quality of life and associated factors including location of cross-training, workplace stress, relationships with colleagues, changes in care delivery and model of care, demands for resources in Northeastern Ontario. These findings have direct health service consequences by identifying the occupational barriers facing nurses working in Northern cities in Ontario.

Predictors and outcomes of engagement among University students: The moderating effect of age

Victor Catano, Soo Sutherland

Saint Mary's University, Halifax, Nova Scotia, Canada

Engagement is part of the emerging trend in positive psychology that focuses on human strengths and optimal functioning (Seligman & Csikszentmihalyi, 2000). Recently, attention has shifted from a focus on engagement as a predictor of burnout to engagement as a predictor of work engagement (Bakker et al, 2008). Predictors of student success are important not only to students, but also for schools and universities. Upadyaya and Salmela-Aro (2013) in reviewing European research found that a high level of student engagement was positively associated with academic success and negatively associated with aspects of ill health such as burnout. Little research has focused on the predictors and outcomes of student engagement in a North American context; this was the purpose of the current study.

Canadian university students (N=200) completed the UWES-S measure of engagement (Shaufeli, et al, 2002); the Trait Self Descriptive Index, a five factor measure of personality; a measure of social and academic integration (SAI; Pascarella & Terenzini, 1980); the GHQ measure of psychological well-being (Golderberg & Williams, 1988); and a demographic questionnaire. With consent, we obtained academic grades from the students' official records. The UWES-S scales of Vigor, Dedication and Absorption were highly correlated with each other (.48 to .70, $p = .000$). Conscientiousness, Openness and Agreeableness predicted engagement, but Extraversion and Neuroticism did not. Engagement predicted SAI, GHQ and academic grades. Age was also positively related to engagement. We conducted hierarchical regressions with each of the outcome measures as dependent variables and 1st Step: age; 2nd Step: Personality factors; and 3rd Step: Engagement. Engagement was the best predictor in all three regressions. Personality did not predict any of the outcome measures. We next reviewed the role of Age. Age predicted academic interest. Age interacted with Engagement to moderate both SAI and well-being, but not academic performance.

Our results show that a positive psychological state of engagement was the best predictor of academic performance and interest, as well as psychological well-being. These results are consistent with Bakker et al.'s (2008) conclusions that engagement is important to understanding an employee's work performance; we have extended their research agenda to show that engagement applies equally to the work performance in academic settings by students. They also support Jimmerson et al.'s (2003) that there are age related differences with respect to student engagement. Our results suggest that improving student engagement may have a profound impact on student success and well-being.

Goal orientation and safety climate: Compensatory versus enhancing mechanisms for safety behaviour?

Anat Drach-Zahavy, Anit Somech

University of Haifa, Haifa, Israel

Since the publication of the influential report *To err is human* (Kohn, Corrigan, & Donaldson, 1999) a tremendous amount of multidisciplinary research has been devoted to identifying safe work contexts such as safety culture or climate that promote safety behaviours in organizations. At the same time, exploration of different individual determinants of safety behaviours has waned considerably (Clarke, 2006). Yet recent findings of a meta-analysis suggest that safety climate might have been "oversold" as the primary indicator of the quality of an organization's safety; accordingly, further investigation of the direct and moderating effects of individual-level variables, such as personality traits, is advocated. Managing safety apparently requires concurrently comprehension of how the organizational context influences safety behaviours, identification of employees' characteristics potentially impacting these behaviours, and understanding how the organizational context influences the safety behaviours of individuals with different dispositions.

The main aim of this study was to test a cross-level model of employee's safety compliance, integrating goal orientation theory and safety climate literature. Three hundred nurses from 76 units completed validated questionnaires on goal orientation and safety climate; data on safety behaviours were obtained through structured observations on nurses while administering medications. Using mixed linear model analysis, we found that safety climate, as well as learning goal orientation and avoid-performance goal orientation, were significantly and positively associated with safety compliance. Cross-level interactions existed between an individual's goal orientation to safety climate and his or her safety compliance: a learning-goal orientation was positively related to safety compliance only when safety climate was high. In comparison, an individual's prove-performance goal orientation was positively related to safety compliance only when safety climate was low. These findings carry important insights for research on person-in-environment models.

Positive safety culture, employee well-being and organizational learning

Marina Järvis, Anu Virovere, Piia Tint

Tallinn University of Technology, Tallinn, Estonia

Objective: The current study proposes a model for a positive safety culture with a focus on well-being and organizational learning, which enables the exchange of tacit and explicit safety knowledge. This article concerns organizational safety culture and the structure or architecture of employees' and employers' attitudes and perceptions to safety as part of that culture, as well as the ability to learn, which also should mean changes in worker's behaviour in order to enhance safety culture. This study examines differences between employees' and employers' perception towards safety and real safety behaviour in Estonian small and medium sized enterprises (SMEs).

Methods: The study assesses senior managers' and employees' perceptions of the current safety culture in Estonian SMEs from different branches of industry, using two different questionnaires on a sample of 463 senior managers and 1,757 employees. The relationships of different aspects of safety culture and employee well-being (psychological, physical and social well-being) as well as senior managers and employees perceptions and attitudes to safety were explored through the deployment of different research measures and methods. A qualitative approach included the study of eight SMEs through observation, analysis of documentation, semi-structured interviews with senior managers and focus group interviews with employees.

Results: The data reveal key issues in safety culture. A statistical analysis of safety culture questionnaires shows many organizations with an outstanding safety culture and positive safety perceptions and attitudes. However, qualitative data indicate some important safety weaknesses and aspects which should be included in process of evaluation of safety culture and safety behaviour in the organization.

Conclusions: Safety as an organizational value is a framework for human behaviour and social interaction in the field of health and safety. The authors emphasise that in order to minimise the differences between employees' and employers' perception towards safety and real safety behaviour, it is vital to focus less on paperwork (formal safety rules) and more on implementing organizational structures which allow for managers and employees to interact and cooperate, to learn from safety practice and experience. The present article also discusses one of the many possible approaches to safety culture - through managing the safety social capital inherent in organizations. The incorporation of health as related to a set of core values in safety culture results in a framework for developing a health and safety culture including social capital, opening up new perspectives in psychosocial risk research as well as for health and safety promotion.

The Chronicle Workshop: A participatory method for evaluating organizational interventions and outcomes

Signe Poulsen, Liv Gish, Christine Ipsen

Technical University of Denmark, Kgs. Lyngby, Denmark

In the intervention literature it is recommended that organizational level interventions are evaluated by participants. The evaluation should include asking about the intervention process and the intervention context. The Chronicle Workshop was introduced in an intervention study in order to evaluate the intervention from the employee perspective. The Chronicle Workshop is primarily used as an exploratory method for developing an understanding of an organization before a change process is implemented. The aim is to gain an understanding of relevant developments in an organization by looking several years back and getting insight into the effects and causes. In the intervention study the Chronicle Workshop was applied as a means of evaluating an intervention process and to gain knowledge about the positive and negative aspects of the intervention.

The Chronicle Workshop was carried out in four small and medium sized enterprises (SMEs) in a participatory organizational intervention study. Four to six employees participated in each workshop. The participants had all participated in the intervention but they did not play a particular role in the process. There are three rounds in the Chronicle Workshop and the final outcome of the workshop is a timeline dating important events and developments. In each round the participants are asked to answer a question by writing the answers on paper. The questions for the three rounds are: 1) What important events have happened during the last six months? 2) What important changes have you experienced with respect to change 1 and change 2? (Change 1 and change 2 relates to the two changes the company has focused on during the intervention) and 3) What work conditions influenced the implemented changes? The participants are asked not to talk with the other participants when answering the questions, in order to get their individual perspectives on the intervention. Each round ends with the workshop facilitator collecting all answers.

In the specific case the method illustrated that in multi-level participatory interventions in SMEs specific gains like improved management, improved project management, more cooperation, improved tone, and improved knowledge sharing are achievable. The method also revealed that the conditions and persons that affected the intervention negatively were the daily operations and extreme busyness. Positive effects were related to allocated time, the facilitators and managers. The method can thus be a helpful tool in order to understand how to facilitate a sustainable intervention.

The use of behaviours to assess supportive managers, and its influence on subordinate engagement, job satisfaction and turnover intention

Kevin Teoh¹, Iain Coyne²

¹Birkbeck University of London, London, UK, ²University of Nottingham, Nottingham, UK

The importance of support from an employee's supervisor/manager for employee wellbeing and performance has been widely emphasised. However, less is known about the actual behaviours that are construed as supportive and those which are not (Rooney & Gottlieb, 2007). In the UK, a systematic programme of research conducted by the HSE (Yarker et al, 2007; 2008) and the CIPD (Lewis et al, 2011) has developed a behavioural framework of supportive behaviours specific to employee stress and engagement respectively. Despite these developments and their strong potential for enhancing the engagement and satisfaction of employees, the impact of these behaviours has not yet been empirically examined.

This study therefore seeks to explore whether supportive manager behaviours (SMB) has the same positive effect as *perception* of support, and if SMB is related to employees' engagement, job satisfaction and turnover intention. Participants were UK based employees (n=252) of a global data management company and completed an electronic survey. The sample comprised 136 males, with an average age of 35.4 years (SD=9.3), and average tenure of 6 years and 2 months (SD=6 years 7 months).

Correlational analysis showed significant correlations between all variables at below 0.001 levels. An increase in SMB was associated with increased engagement ($r=.45$) and job satisfaction ($r=.54$) while it was associated with a decrease on turnover intention ($r=-.50$). Turnover intention had a negative relationships with engagement ($r=-.61$) and job satisfaction ($r=-.65$). Hierarchical regressions revealed that SMB predicted the outcome variables even after demographic information was controlled for. Bootstrapping mediation showed that job satisfaction and engagement mediated the relationship between SMB and turnover intention. Moreover, in both relationships, job satisfaction was found to be a stronger mediator than engagement.

The findings indicate that specific supportive and unsupportive manager behaviours are related to turnover intentions, and that this was mediated by engagement and job satisfaction. Supportive manager behaviours involve providing role clarity and meaning at work, and supporting employee growth and monitoring development, which are important antecedents for engaged and satisfied employees.

Organizations and managers should be aware that they can influence employees' turnover intentions by making sure that they are engaged and satisfied. This can be done through improving the support they receive from managers and the organization. Managers should provide clear instructions, be able to provide constructive criticism, and take interest in their subordinates' wellbeing and development.

The importance of supervisor emotion regulation in the provision of effective social support: Implications for employee strain

Michelle Tucker, Nerina Jimmieson

University of Queensland, St Lucia QLD, Australia

Supervisor support is generally considered to have a beneficial impact on the psychological health of employees. Moreover, in the occupational stress literature, supervisor support is often conceptualised as an important job resource that buffers the negative effects of high demands. While some empirical evidence suggests supervisor support allows employees to cope more effectively with stressors, several studies have found reverse-buffering effects, whereby supervisor support exacerbates, rather than mitigates, employee stress reactions. We argue that the emotional competence of the supervisor (in regards to their emotion regulatory abilities) will influence the effectiveness of their support-giving behaviours for reducing stress reactions in subordinates. Thus, we hypothesise that supervisor emotion regulation is a second moderating factor in the interaction between emotional demands and supervisor support on employee strain. In this respect, supervisors with the ability to regulate their emotions will be better able to direct their supportive behaviours in a positive manner to buffer high emotional demands.

These propositions were tested in a sample of 210 US employees who completed 1-month time-lagged surveys in which emotional demands, supervisor support, and supervisor emotion regulation was measured at Time 1. Burnout (i.e., exhaustion, depersonalisation, and accomplishment), job dissatisfaction, and intentions to seek medical advice, change jobs, and leave the organization were measured at Time 2. It was found that, when supervisor emotion regulation was high, supervisor support buffered the positive effects of high emotional demands on employee exhaustion, depersonalisation, and job dissatisfaction, as well as intentions to seek medical advice, change jobs, and leave the organization. In contrast, when supervisor emotion regulation was low, high levels of supervisor support did not mitigate the effects of high emotional demands and, in fact, had a stress-exacerbating effect in the prediction of these employee stress reactions.

Thus, it appears that supervisors high in emotional competence are able to provide better support that matches the emotional needs and concerns of employees in emotionally demanding situations. Conversely, supervisors lacking the ability to regulate their emotions may not provide the type of support that matches the needs of their employees. These results help to shed light on the mechanisms that account for the reverse-buffering effects of high social support seen in the stress literature. Practical implications highlight the need for supervisors to be able to adjust and regulate their own emotional states so that they provide effective support to their subordinates.

A new form of organizational stress intervention – Considering the spillover of stress from work to home and vice versa

Corina A. Merz¹, Fridtjof W. Nussbeck², Guy Bodenmann¹

¹University of Zurich, Zurich, Switzerland, ²University of Bielefeld, Bielefeld, Germany

Purpose: Most employees have to deal with competing demands of different domains that have to be fulfilled simultaneously, such as showing an outstanding performance at work and being a caring partner at home. As previous research has shown, stress can spill over from work into home, and vice versa. The intimate partner is an important resource and a buffer against the impact of stressful events. As the number of employees living in dual earner relationship is high, stress interventions that include both the work and relationship sphere are a promising new form to prevent employees from stress related consequences. Therefore, we focused on the design of a new form of stress intervention for dual-earner couples and the evaluation of its stress buffering impact on performance and well-being. For this reason the Couples Coping Enhancement Training (CCET), has been adapted to the needs of dual earner couples in the work environment. The CCET is a cognitive-behavioral stress intervention, teaching couples how to deal with daily hassles and fostering dyadic coping skills. This interventional approach uses positive synergies between work and home to prevent stress spilling over from one domain to the other. Accordingly we hypothesized that the enhancement of dyadic coping skills buffers stress related performance deterioration and negative impact on well-being within dual earner couples.

Design: Participants were randomly assigned to the intervention or the wait-list control group ($N = 160$ dual earner couples). Four questionnaire assessments were conducted: two weeks before the training (pre) and two weeks (post), three months (follow-up 1) and six months (follow-up 2) after the training measuring dyadic coping, well-being and performance.

Results and Originality: Latent difference analyses conducted with Mplus using longitudinal dyadic data supported our hypotheses. We believe that fostering dyadic coping skills is an ideal solution to bridge the gap between work and home and make it possible for employees to adequately cope in times of stress.

Limitations and Implications: The main limitation was to examine long-term effects; further follow-up assessments could be measured. Furthermore, as stress is highly influential for performance outcomes and well-being of employees, interventions should not only focus on the intra-individual level (e.g., train coping strategies), but also on the inter-individual level by explicitly fostering coping skills within meaningful social support resources, such as intimate relationships.

Predicting empathy in health and social care workers: Implications for psychological wellbeing

Gail Kinman, Louise Grant, Sandra Leggetter

University of Bedfordshire, Luton, Bedfordshire, UK

The demonstration of empathy is pre-requisite for "helping" professionals, as it underpins person-centred care. Engaging in empathic relationships with patients and clients can also have positive implications for the wellbeing for helping professionals. There is a risk, however, that over-identifying with the problems of service users problems can lead to "unbounded" empathy which, in turn, has the potential to engender compassion fatigue and burnout. Little is known about the characteristics that underpin the ability of health and social care workers to manage their empathic responses effectively. This study examines the individual difference variables that predict empathy (i.e. empathic concern and perspective taking) and its relationship with empathic distress and wellbeing more generally.

A sample of 653 health and social care practitioners (89% female) completed an online questionnaire. Davis's (1983) model of empathy was utilised which encompasses perspective taking (the ability to adopt the perspective of others) and empathic concern (feelings of warmth, compassion and concern for others) as well as empathic distress (anxiety and discomfort that may result from an empathic encounter). Predictor variables were gender, age and caring experience, as well as emotional intelligence (Schutte et al., 1997), reflective ability (Aukes et al., 2007) and just world beliefs (Dalbert, 1999). Psychological distress was assessed by the GHQ-12 (Goldberg & Williams, 1988).

The model explained 56% of the variance in empathy, with gender, caring experience, emotional literacy and reflective ability making the strongest contributions. Both empathic concern and perspective taking were negatively related to empathic distress. A strong positive relationship was found between empathic distress and psychological distress more generally, highlighting the pervasive impact unbounded empathic responses can have on wellbeing. Ways in which appropriate empathy might be enhanced in health and social care contexts such as peer coaching, mindfulness and the use of fiction are explored and evaluated.

Is outcome responsibility at work emotionally exhausting? Investigating personal initiative as a moderator

Antje Schmitt¹, Deanne N. Den Hartog², Frank D. Belschak²

¹*University of Kassel, Kassel, Germany,* ²*University of Amsterdam, The Netherlands*

In this study, we focus on the concept of outcome responsibility implying that employees' decisions at work have high economic and financial implications. Employees with high outcome responsibility have jobs in which making mistakes or being unaware of problems causes financial harm to the organization (Jackson, Wall, Martin, & Davids, 1993). On the one hand, perceiving high outcome responsibility can put strain on employees and thus cause emotional exhaustion (cf. Jackson, et al., 1993). On the other hand, responsibility is a critical psychological state that is related to the experience of intrinsic motivation and satisfaction (Hackman & Oldham, 1976). Feeling responsible may indicate a sense of ownership, and meaningfulness such that employees fully identify with their work. Thus, whilst responsibility may be perceived as a strain, it may also have well-being benefits.

The theory on person-job fit suggests that a fit between individual preferences and characteristics of the job will affect well-being outcomes (Caplan & Harrison, 1993). Based on this theory, we propose a key role for proactivity of employees. We hypothesize that employees' personal initiative moderates the relationship between outcome responsibility and emotional exhaustion as one main indicator of well-being (Fuller, Marler, & Hester, 2006; Parker, Wall, & Cordery, 2001). Jobs that require taking responsibility for outcomes will be seen more favourably by employees who value going beyond formal job requirements through taking an active, self-starting approach to work, and who like anticipating and initiating change in the environment (Frese & Fay, 2001). Employees high in personal initiative are thus assumed to perceive high outcome responsibility as challenging rather than straining with potential gains for well-being. However, employees low in personal initiative whose behavioural styles do not fit with the actual work demands, might risk exhaustion in work environments that require taking high outcome responsibility as this could form a strain for them.

We tested our hypothesis in a multi-source study among 138 employee–colleague dyads. Employees' personal initiative was peer-rated by colleagues. Results of hierarchical moderated regression analysis revealed that peer-rated initiative moderated the relationship between outcome responsibility and emotional exhaustion, such that the relationship was positive for employees showing high personal initiative and non-significant for employees showing low personal initiative. This study contributes to previous research on job design and on well-being in the workplace. Practical implications for human resource management in terms of selection and training of employees for jobs high in outcome responsibility are discussed.

Sickness absence in the workplace and gender differences

Elvira Micali, Concettina Fenga

University of Messina- University Hospital, Messina -Sicilia, Italy

Background: Italian legislation reiterates that work, and equipment to perform it, must be adapted to workers and not vice versa. Employers are required to manage any risks bearing in mind differences between male and female workers, identifying the hazards that are most important for women's health. To explore this, we analysed the phenomenon of sick leave, in female staff of the University Hospital of Messina (Italy).

Subjects and Method: In the period between 2009 and 2012, sick leave of female staff lasting more than three consecutive days, excluding maternity leave, was compared with sick leave taken by male staff operating under similar duties. Six main areas were considered based on specialization and work that exhibits the same type of risk: 1) Area of General Surgery 2) Area Emergency/Urgency and First Aid 3) Medicine General and Special Area 4) Paediatric Area 5) Service Area 6) Administrative Area.

Results: Between 2009 and 2012 the turnover for the total number of employees increased from 2,743 to 1,926. The following percentages of sick leave of female staff compared with male colleagues were observed:

- Year 2009 total employees = n.2743 (W.=n. 1495; M=n.1248), percentage absences: women 16.3% against 11.5% males
- Year 2010 total employees = n.2.209 (W =n. 1205; M=n.1004), percentage absences: women 17.2% against 10.4% males
- Year 2011 total employees = n.2225 (W.=n.1131; M=n.1094), percentage of absences: women 18.3% against 12.8% males
- Year 2012 total employees = n.1926 (W.=n.1025; M = n.901), percentage of absences: women 19.3% against 13.6% males

Discussion and Conclusions: Female employees have a higher percentage of sick leave relative to their male colleagues. Our data showed that female staff employed in the Service Area and Administrative Area, have more sick leave than the female staff in the macro-General Surgery and Emergency/Urgency and First Aid. Additionally female staff acting as medical directors had less sickness absence compared to female health care sector. This suggests that women employed in areas of high specialization with management responsibilities have a greater sense of belonging than the female staff with executive duties.

Psychological distress and work/home strains as prospective predictors of sickness absence in Norwegian mothers and fathers over a six year period

Wendy Nilsen^{1,2}, Anni Skipstein¹

¹Norwegian Institute of Public Health, Oslo, Norway, ²Norwegian Knowledge Centre for the Health Services, Oslo, Norway

Background: Sickness absence has incremental effects and large cost for society. While the sickness absence curve has flattened for men during the last decade, it has increased for women building a gender-gap. Even though Norway is one of the most gender egalitarian countries in the world, mothers still spend almost twice as much time on household work and parenting as fathers. Thus, one reason for the gender-gap in sickness absence might be related to differences in work and home strains. Another explanation of the gender-gap in sickness absence might be related to psychological distress (depression and anxiety) since women typically report more symptoms than men. It is thus important to examine these predictors of sickness absence with a gender-specific perspective.

Aim: Examine psychological distress and strains as longitudinal predictors of sickness absence in mothers and fathers in a gender-specific perspective.

Method: Data from the longitudinal Tracking Opportunities and Problems in Childhood and Adolescence Study (TOPP) comprising of 913 families will be used. Measures of mothers' and fathers' psychological distress (measured by Hopkins Symptom Checklist) and work/home strains at three time points across a four time period (Q1-Q2) is used to predict self-reported frequency of sick leave at the last time point (Q3) two years later. Structural equation modelling will be used to examine 1) longitudinal relations between the distress and strains and sick leave, and 2) group differences and similarities between mothers and fathers concerning these longitudinal relations.

Results: Findings suggest that there are some significant universal effects of certain strains, such as own health and family health, which predicts sickness absence in both parents. However, there are also some significant cross-over specific effects from father reported strains to mothers' sickness absence reports, and vice versa. Gender-specific as well as gender-universal predictors were thus present, which is important for narrowing the gender gap in sickness absence.

The relationship between occupational expertise and perceived employability: The type of relationship and causality

Ellen Peeters, Nele De Cuyper, Hans De Witte
KU Leuven, Leuven, Belgium

Perceived employability concerns the individual's perception of the possibility of getting a new job either in the current organization (perceived internal employability) or with another employer (perceived external employability). Previous studies have advanced perceived employability as a resource that promotes well-being and reduces ill-being, and thus it seems important to study antecedents to perceived employability that are malleable in view of identifying possibilities for employability-enhancement. In response, we investigate experience concentration as a potentially important antecedent to perceived employability. We selected occupational expertise for two reasons: expertise is malleable and it is critical in today's knowledge society.

The general hypothesis is that expertise will increase perceptions of perceived employability. We believe this hypothesis is somewhat too straightforward for three reasons. First, it does not account for the distinction between internal and external perceived employability: occupational expertise might be more closely tied to the present job, and thus be more important to internal versus external employability. Second, the relationship between expertise and perceived employability might not be linear. Experience concentration can lead workers to feel locked-in. Due to a "too high" level of very specific expertise, the employee may not perceive to have expertise that can be used also in other organizations. The result is that the relationship between expertise and particularly external perceived employability is curvilinear. Finally, perceived employability may affect occupational expertise rather than vice versa, for example when employable workers have more resources to invest in expertise-enhancing activities. In response, we will (1) test the type of relationship between occupational expertise and perceived internal and external employability (e.g. linear versus curvilinear relationship), and (2) test the causality of this relationship.

We will test the type of relationship through curve estimations and hierarchical regressions, the causal pathways of the relationships between occupational expertise and perceived internal and external employability will be tested through longitudinal analyses with structural equation modelling. Data from 4143 employees from 14 organizations was collected in the first wave with the second wave data collected in October 2013.

Causal pathways between perceived employability and turnover intention: The mediating role of well-being

Dorien Vanhercke¹, Nele De Cuyper¹, Hans De Witte^{1,2}

¹*KU Leuven, Leuven, Belgium,* ²*Vanderbijlpark Campus, North-West University, South Africa*

Perceived employability concerns the employee's perception of possibilities of finding new employment in other organizations. From the employer's perspective, highly employable workers present a competitive advantage: these employees are generally highly competent, and therefore contribute to organizational functioning. However, the employer may also fear to lose highly employable staff to competitors. This is referred to as the management paradox which may refrain employers from (further) investing in the employability of their employees because of fear for turnover. We believe this paradox is false: along the lines of the Job Demands–Resources model we believe that perceived employability stimulates employees' well-being as employees who perceive themselves as highly employable are likely to be in jobs providing them with many resources. In turn, when employees feel well they are less inclined to leave the organization.

Accordingly, the aim of this study is to study the pathways between perceived employability, well-being, and turnover intention. Specifically, we hypothesize (1) a positive effect of perceived employability on well-being, and (2) a negative effect of well-being on turnover intention.

Hypotheses were tested with structural equation modeling in a two-wave sample of 380 employed from Flanders (i.e., Dutch speaking part of Belgium).

Results supported both hypotheses: perceived employability positively affects well-being and well-being negatively affects turnover intention.

In conclusion, perceiving job possibilities with other employers enables employees to feel well. Feeling well, in turn, lowers employees' intention of leaving the organization. Therefore, employers are advised to (continue to) invest in employability, as the risks on turnover associated with such investments are limited.

Influence of authentic leadership, trust, and areas of worklife on adverse patient outcomes

Carol A. Wong, Lisa Giallonardo

University of Western Ontario, London, Ontario, Canada

Background: Authentic leadership is a relational leadership style that is grounded in the leader's positive psychological capacities, honesty and transparency, strong ethics and behavioural integrity. Although several work environment factors have been cited as critical to patient outcomes, studies linking leadership styles with patient outcomes are limited suggesting the need for additional research to investigate the mechanisms by which leadership may influence patient outcomes. By virtue of their positions as bedside care providers round-the-clock, nurses are favourably positioned to report their estimates of the frequency of adverse outcomes on their units.

Purpose: Our purpose was to test a model examining relationships among authentic leadership, nurses' trust in their manager, areas of worklife, and nurse-assessed adverse patient outcomes.

Method: Secondary analysis of data collected in a cross-sectional survey of 280 (48% response rate) registered nurses working in acute care hospitals in Ontario was conducted using structural equation modelling. Variables were measured using the Authentic Leadership Questionnaire, Trust in Management Scale, Areas of Work Life Scale, and frequency of nurse-

assessed adverse patient outcomes. The theoretical model was tested using path analysis with structural equation modelling (SEM) using AMOS version 20.0. A sample size of at least 200 subjects is recommended as sufficient for SEM.

Results/Outcomes: The final model fit the data acceptably ($\chi^2 = 1.30$, $df = 2$, $p = .52$, $IFI = .99$, $CFI = 1.00$, $RMSEA = .00$). Authentic leadership was significantly associated with decreased adverse patient outcomes through trust in the manager and areas of worklife.

Conclusion: In this study we found additional support for authentic leadership theory by connecting authentic leadership to Maslach and Leiter's areas of worklife and nurse-assessed patient outcomes. Our results contribute to a small but growing body of empirical evidence showing the connection between relational nursing leadership and patient outcomes. Findings suggest that nurses who see their managers as demonstrating high levels of authentic leadership report increased trust, greater congruence in the areas of worklife and lower frequencies of adverse patient outcomes. The importance of authentic leadership in creating workplace conditions for nurses that foster trust in the manager and facilitate reduced adverse events for patients was reinforced.

Lifestyle, problem solving, workplace bullying and strenuous working conditions: A moderated mediation model

Milda Astrauskaite¹, Roy Max Kern², Guy Notelaers³

¹*Kaunas University of Technology, Kaunas, Lithuania*, ²*Vytautas Magnus University, Kaunas, Lithuania*, ³*University of Bergen, Bergen, Norway*

Previous research linked personality attributes of a potential target to higher exposure to workplace bullying. In addition to direct relationships, personality seems to be indirectly related to workplace bullying, e.g. via conflict solving styles. Problem solving as a collaborative conflict solving style seems to be encouraged by a belonging/social interest lifestyle theme that in turn deters bullying. On the opposite side, problem solving seems to be discouraged by being cautious that potentially increases bullying. In addition, it seems that individuals who are exposed to strenuous working conditions are more susceptible to experiencing higher workplace bullying. According to the Job Demands Control model, in the circumstances where job demands are high and control is low, active problem solving is decreased (Karasek, 1979) that in turn may be related to increased workplace bullying. It was accordingly hypothesized that belonging/social interest and being cautious are not only directly, but also indirectly related to workplace bullying, i.e. via problem solving, and that the direct and an indirect relationship between lifestyle themes and workplace bullying are moderated by job demands and job control (cf. strenuous working conditions).

The Negative Acts Questionnaire-Revised was used to measure workplace bullying (Einarsen et al., 2009). Problem solving was evaluated using one scale from the Dutch Test of Conflict Handling (De Dreu et al., 2001). Scales of pace and amount of work and independence derived from the Short Inventory to Monitor Psychosocial Hazards (Notelaers et al., 2007) were used to evaluate strenuous work conditions according to Karasek's (1979) Job Demands Control Model.

The data analysis of 494 respondents (82.8% women and 16% men) of one service sector organization in Lithuania demonstrated that belonging/social interest was only directly related to workplace bullying, while the relationship between being cautious and workplace bullying was partially mediated by (lower) problem solving. In addition, while higher belonging/social interest was related to lower bullying, in strenuous working conditions it had an inverse relationship. Differently than expected, higher pace and amount of work encouraged problem solving for individuals higher on being cautious and, in turn was related to lower exposure to workplace bullying.

Stuck in the endless present: Workplace boredom and its correlates

Lotta Harju^{1,2}, Jari Hakanen¹, Wilmar Schaufeli³

¹*Finnish Institute of Occupational Health, Helsinki, Finland,* ²*Aalto University of Science and Technology, Dept. of Industrial Engineering, Helsinki, Finland,* ³*Utrecht University, dept. of Psychology, Utrecht, The Netherlands*

Introduction: Workplace boredom is defined as an unpleasant state of passiveness at work that is characterized by lack of interest at work and difficulties concentrating in tasks. Despite the increase in studies on motivational affect, such as work engagement, recent research on workplace boredom remains scant. This is a problem, as previous studies indicate it has numerous negative consequences on employees and organizations alike.

Objectives: We draw on an extensive data of 11475 employees of 87 Finnish organizations representing various industrial sectors to investigate the experience in Finnish workplaces and how is it related with employee health and job-related attitudes.

Methods: One-way analysis of variance (ANOVA) is applied in describing levels of job boredom and its demographic and occupational correlates. Hierarchical logistic regression analysis and odds ratio estimates are applied in further examination of the associations between job boredom, employee health and retention.

Results: Men and under 30-year old employees experienced more boredom at work as compared to their reference groups. Furthermore, employees working in transportation, manufacturing, and recreation and entertainment showed higher levels of workplace boredom. The experience increased the likelihood of negative health-related outcomes. In addition, it increased the odds of exit and early retirement intentions.

Implications: Opposed to the common stereotype, our findings imply workplace boredom is a phenomenon concerning a wide range of industries. Overall, boredom at work was experienced in various groups without a clear common denominator implying a further investigation on its origins is needed. Our findings show a strong association between job boredom and negative health perceptions and job-related attitudes.

Conclusion: This is the first study mapping the correlates and outcomes of workplace boredom in a wide, heterogeneous sample of Finnish employees. The results support the notion that job boredom is negatively associated with employee well-being and retention.

Evaluating the effectiveness of mindfulness-based resilience skills training for human service professionals: A randomized control trial of the MARST program

Aileen Pidgeon¹, Andrew Hanna¹, Breeana O'Brien¹, Frances Klaassen²

¹*Bond University, ROBINA, QLD, Australia,* ²*Mercy Family Services, TOOWOOMBA, QLD, Australia*

Human services professionals responding to meet the needs of clients, stakeholders and organizations often face emotionally demanding and trying circumstances. The high prevalence of stress-related physical and mental health problems experienced by human service professionals highlights the importance of providing them with adequate support. One of the ways to recognize and encourage human services professionals to become aware and address their own needs is through a focus on teaching self-care and cultivating resilience through professional development.

The current randomised control trial evaluated the effectiveness of a mindfulness-based resilience training program, the Mindful Awareness Resilience Skills Training (MARST) with human service professionals. MARST is a resilience-promoting intervention that targets increasing resilience, positive well-being and reappraisal, mindfulness and reducing perceived

stress. Forty-six human services professionals were randomly allocated to either the MARST intervention group or control group. The intervention group received 3 days training over 3 weeks in cognitive behaviour therapy and mindfulness techniques, the control group received no intervention.

Participants were assessed at pre- and post-intervention, and 1 month follow-up. At post-intervention, the results showed significant differences between the groups, with the MARST intervention group reporting significantly higher improvements in levels of resilience, mindfulness, secondary trauma, positive well-being and reappraisal compared to the control group. Treatment gains were maintained at 1 month for resilience and positive reappraisal and in addition psychological vitality and perceived stress levels significantly improved.

The results indicate that a brief, mindfulness-based resilience training intervention, MARST, is a promising intervention for increasing resiliency and reducing stress among human service professionals.

Cognitive impairments in outpatients with perceived work-related stress

Anita Eskildsen^{1,2}, Lars Peter Andersen¹, Anders Degn Pedersen³, Sanne Kjær Vandborg^{4,2}, Johan Hviid Andersen¹

¹Danish Ramazzini Centre, Department of Occupational Medicine, The Regional Hospital Herning, Herning, Denmark, ²The Health Department, Aarhus University, Aarhus, Denmark, ³Vejle fjord Rehabilitation Centre, Stouby, Denmark, ⁴Clinic for OCD and Anxiety Disorders, Aarhus University Hospital Risskov, Aarhus, Denmark

Patients on sick leave due to work-related stress often complain about impaired concentration and memory. It is, however, undetermined how widespread these impairments are and whether cognitive functions normalize when patients are recovered from work-related stress.

The aims of this study are to examine whether patients with work-related stress have cognitive impairments compared to a matched control group without stress and whether there are changes in cognitive function after 1 year.

The study takes a prospective approach and follows a group of patients (n=60) from shortly after onset of sick leave or professional care-seeking until expected recovery after 1 year. A healthy control is matched to each patient regarding age, gender, and educational level. Both controls and patients are assessed with a comprehensive standardized neuropsychological test battery at baseline and at 1-year follow-up. The present project can help elucidate how widespread cognitive impairments are in patients with work-related stress and whether these impairments are reversible within a one-year period and therefore help to improve the guidance of patients and their workplaces.

Preliminary results from the study show that compared to controls, patients generally show mildly reduced performance across different domains of the neuropsychological test battery but only performance on processing speed and prospective memory show statistically significant differences with 33 patients and controls tested. There is, however, no difference between patients and controls on tests of working memory. Final results from the baseline neuropsychological test session will be presented at the conference.

A study focusing on organizational antecedents of workplace incivility

Eva Torkelson, Elinor Schad, Björn Karlson, Martin Bäckström
Department of Psychology, Lund University, Lund, Sweden

Workplace incivility includes behaviors that violate the workplace norms for mutual respect and is characterized by low-intensity and ambiguous intent to harm the target (Andersson & Pearson, 1999). Several authors argue that there has been an increase in workplace incivility in recent years and that changing working life, downsizing and stress may be some of the

factors explaining the increase. The deleterious effects of workplace incivility have been discussed, such as lower productivity, mental health problems, decreased satisfaction and increased intention to leave the organization. In addition, a culture of workplace incivility may be created that can have long-term effects on both the individuals and the organization.

In a recently started project the aim is to contribute further knowledge about workplace incivility as a social process in the organization, including the instigators, the targets as well as the bystanders. In the first part of the project, focusing on the perspective of the instigators, the aim is to study aspects that can be seen as antecedents of the process. The hypothesis is that there will be an increase in instigated workplace incivility when employees have recently been exposed to organizational changes, have perceived job insecurity, stress, lack of control, low social support and high demands. A further hypothesis is that there will be an increase in instigated workplace incivility when the instigators themselves have perceived workplace incivility from the supervisor or coworkers.

Members of "The Teachers' Federation", a Swedish union of employees working in the school sector, were invited to participate in the first part of the project. Along with their monthly information letter from their Union, they received a presentation of the project and a link to an internet survey. Responses from 355 employees were received.

The results show, partly in line with the hypothesis, that perceived low social support from coworkers, high demands and stress are related to instigated workplace incivility. The results also show that the main predictors of instigated workplace incivility are perceived incivility from supervisor or coworkers. The results will be discussed in relation to the hypotheses and the focus will be on implications for further research and practice.

ACKNOWLEDGEMENT: The project is financed by the Swedish Research Council for Health, Working Life and Welfare (dnr 2012-0138).

An exploratory bi-factor analysis of work-related well-being: Work engagement and burnout

Leon de Beer¹, Jaco Pienaar¹, Sebastiaan Rothmann Jr.²

¹North-West University, Potchefstroom, North West, South Africa, ²Afriforte (Pty) Ltd., Potchefstroom, North West, South Africa

Introduction: Work-related well-being research, specifically in the context of the Job Demands-Resources model, is abundant and the model has been well established. Some questions have been addressed regarding the dimensionality of work engagement and burnout: i) Are they opposites? ii) Are they independent constructs? iii) Can they be both opposites and independent constructs, dependant on level? However, results are neither conclusive nor unambiguous. This study will report on an exploratory bi-factor analysis on the components of work-related well-being (vigour, dedication, exhaustion and cynicism) in an attempt to further clarify the potential components of work-related well-being.

Method: Mplus 7.11 was used to perform an exploratory bi-factor analysis, with the bi-geomin rotation option and the maximum likelihood estimator. A general factor was requested, with an additional three factors, from the extraction. The items for vigor, dedication, exhaustion and cynicism were the input.

Results: The results of the extraction revealed that a global general factor, and two of the three additional requested factors, was acceptable. The items of the four constructs loaded significantly as follows: on the general factor, all the vigour and dedication items loaded positively, and all the exhaustion and cynicism items negatively. On a second factor, the vigour and cynicism items loaded positively, and on a third factor, the exhaustion and dedication items loaded positively.

Discussion: These results reveal a global general factor including components of work engagement and burnout. However, there appear to be two other factors at work in the dynamics of work-life. The first additional factor had significant vigour and cynicism items, and represents a construct that may be termed "Distraction". The second additional factor had significant exhaustion and dedication items, and may be termed "Over-commitment".

Social context and resilience as multilevel predictors of job satisfaction and performance: A longitudinal study

Isabella Meneghel¹, Laura Borgogni², Mariella Miraglia², Marisa Salanova¹, Isabel M^a Martínez¹

¹WONT research team, Universitat Jaume I, Castellón de la Plana, Spain, ²b Department of Psychology, "Sapienza", University of Rome, Roma, Italy

Overall job satisfaction is perhaps the most central studied attitude in organizational research and frequently it was suggested that it is a key factor influencing job performance. Although job satisfaction reflects individual experiences, it is likely to be affected by attributes of the individuals and the context in which they operate.

The current study explores the predicting role of individual work resilience and shared team perceptions of social context on job satisfaction, as well as the relationship between job satisfaction and job performance rated by supervisors. Moreover, the study tests the mediation role of job satisfaction between work resilience and job performance, and between shared team perceptions of social context and job performance.

A sample of 305 white-collar employees, clustered in 67 work-units working in the same service Italian company, filled out questionnaires about perceptions of social context and work resilience at Time 1 and about job satisfaction at Time 2 (19 months later), whereas employee performance were provided by supervisors at Time 2. Hierarchical linear modeling supported the hypothesized relationships, and highlighted that: a) shared team perceptions of social context (team level) and work resilience (individual level) are multilevel predictors of individual job satisfaction; b) shared team perceptions of social context are positively related to work resilience; c) job satisfaction is positively related to job performance; d) job satisfaction fully mediates the relation between work resilience and job performance; and e) job satisfaction fully mediates the relation between shared team perceptions of social context and job performance.

The findings suggest the pivotal role of job satisfaction to predict job performance. At practical level, these results suggest ways to enhance job satisfaction and thus job performance, increasing shared perceptions of social context and job resilience.

A management approach to prevent work related stress among health care workers

Gabriele d'Ettorre, Chiara Maselli, Maria Rita Greco
Local Health Authority, Brindisi, Italy

Background: Job related stress is considered the second most important problem by European workers and it is the cause of 50-60% of lost workdays. Scientific literature reports that healthcare workers are particularly exposed to risk of burn-out and psychosomatic health complaints as psychological reactions to stressful work conditions.

Objectives: The aim of this study was to evaluate the objective level of work-related stress among healthcare workers and to identify the corrective actions to improve work organization and reduce work-related stress.

Methods: The authors conducted interviews with 98 Medical Directors and 107 Head Nurses of hospital departments and explored objective work-related stress indicators among each

department. The adoption of a multidimensional validated tool as the one proposed by INAIL, allowed an integrated analysis of sentinel indicators, objective factors of context and content. The general indicators investigated were: function and organizational culture, role in the organization, home-work interface, career development, scheduling of tasks, workload, environmental and ergonomics conditions, absence from work, turnover, disciplinary procedures, internal mobility, and hours of training.

Results: The findings of the study showed useful elements to improve quality of life and relationships in the workplace such as: spreading the culture of participation within the organization, implementation of improvement measures, developing the concept of prevention of psycho-social risks, promulgation of the ethical code.

Implications and conclusions: The study showed the need to improve the culture of work-related stress prevention and stress management programs. The authors suggest job organization interventions as an instrument of primary prevention in order to guarantee the worker's wellness, improve the team development, reflective dialogue and feedback, decision making policies and processes; the hospital departments should offer safety training programs to assist the healthcare workers to adopt constructive stress coping strategies. Interventions aimed at improving psychological health of nurses and hospital staff should focus on workload, workers' personal expectations and job satisfaction. The authors underline the need to adopt the ethic code for healthcare workers, to help them conduct their actions in accordance with ethical standards.

No pain, no gain: Sacrificing work-family balance and higher income for career opportunity and the role our mentors play

Brooke Baker, Deanna Burns, Mary Kate Wood, Megan Morgan, Robin Kowalski, Shelby McKinney

Clemson University, Clemson, SC, USA

In response to recent calls for literature on the growing disparity of women in STEM positions, the authors examined the work and family habits of 540 graduate students (319 female, 221 male) from a medium-sized U.S. university to gain insight into the nature of STEM pre-employment and possible determinants of career approachment and disengagement. Specifically, program and family domain variables were measured across multiple STEM post-baccalaureate programs, including demands, program-family balance, and satisfaction with program-life balance, program-family positive spillover, perceived stress, and mentor support. Mentor support was hypothesized to moderate the relationship between program demands and 1) program-family conflict, 2) program-family positive spillover, 3) stress, and 4) general life satisfaction.

Demographic analyses indicated that the sample was predominately Caucasian (67.7%) with a mean age of 28.2 ($SD = 8.6$). Thirty-one percent of participants were married and 14.8% had children (range = 1 – 6). Perceived program-family conflict in this sample was moderate ($M = 3.40$, $SD = .92$), with program demands ranging from 0 – 98 hours per week. Regression analyses revealed program-family conflict to be a positive predictor of stress, $\beta = .398$ ($p < .001$), whereas mentor support was found to be a negative predictor of stress, $\beta = -.228$ ($p < .001$). Hypotheses testing confirmed all interactional effects for mentor support on hypothesized relationships (Overall $R^2 = .017$, $p < .001$; Overall $R^2 = .082$, $p < .05$; Overall $R^2 = .011$, $p < .05$; Overall $R^2 = .023$, $p < .01$). Although mentor support somewhat appeared to buffer conflict and account for increases in life satisfaction, item-level analyses indicated that 23.5% strongly disagreed that their life was close to ideal. And, as life satisfaction was positively related to program-life satisfaction ($r = .464$, $p < .001$) and negatively related to program-family conflict ($r = -.267$, $p < .001$), it leads one to question whether or not students dissatisfied with their current conditions will pursue jobs with similar demands.

Thus, although mentors can lend support, life management is up to the student. However, understanding graduate student perceptions of work-family balance has important implications for recognizing variables involved in STEM career approachment, as these individuals are typically introduced to a realistic job preview of their desired profession, experience similar demands as their full-time mentors, but are paid similar wages as those living near the poverty line. The present study corroborates the significant impact (albeit small) supportive mentors have on individuals' work-life management.

Co-occurrence of lifestyle factors and psychosocial job characteristics

*Vera JC Mc Carthy, Ivan J Perry, Janas M Harrington, Birgit A Greiner
University College Cork, City, Ireland*

Objectives: The difference in lifestyle between a working and a non-working population has not been investigated previously. Furthermore, the association between positive job characteristics of current workers and the co-occurrence of positive lifestyle behaviours is scarcely known.

Methods: We carried out a population-based cross-sectional study on a sample of 2047 males and females (age range 50-69-years) attending a primary healthcare clinic. Just over half the sample were current workers ($n=1025$). Job characteristics (job demands – quantitative demands and cognitive demands; job resources - possibility for development and influence at work) were determined using the Copenhagen Psychosocial Questionnaire. Each scale was divided into tertiles. Positive lifestyle behaviours included taking a healthy diet, moderate alcohol intake, staying tobacco-free and being physically active.

Results: In the total sample 3% had no positive lifestyle behaviours and 12% had 4. The average number of positive lifestyle behaviours was significantly higher for the worker than non-worker. Workers with intermediate possibility for development were more likely to have a higher number of positive lifestyle behaviours. However, it is worth noting that workers with high demands (quantitative and cognitive demands) also had clustering of positive lifestyle behaviours (p for trend ≤ 0.01).

Conclusion: Although there was some evidence of positive job characteristics being associated with positive lifestyle behaviours, an unexpected association between job demands and positive lifestyle behaviours was also found. These findings can help target and inform health promotion initiatives to groups in our communities and workplaces.

Identifying change profiles of ethical culture and their associations with well-being: A two-year longitudinal study

Mari Huhtala^{1,3}, Muel Kaptein², Taru Feldt¹

¹University of Jyväskylä, Jyväskylä, Finland, ²Erasmus University, Rotterdam, The Netherlands, ³University of Tampere, Tampere, Finland

Objective: The main aim of the present study was to examine the change and stability of evaluations of ethical organizational culture (values and practices that promote ethical behaviour) across two years. The second aim was to investigate longitudinal associations between the experiences of ethical culture, and psychological well-being outcomes, namely, ethical strain, burnout, and work engagement. To date, ethical organizational culture has been investigated by using solely cross-sectional designs, thus highlighting the significance of this study.

Methodology: The data was drawn from a two-year follow-up study, consisting of managers ($n = 464$) from different organizations, in middle and upper management levels, aged 27–70 years. Ethical culture was operationalised using the Corporate Ethical Virtues scale, comprised of 58 items (Kaptein, 2008). Burnout and work engagement were measured using 9-item scales, and ethical strain with two items.

Results: Based on Latent Profile Analysis, four different patterns of the strength of ethical culture were identified: 1) low decreasing, 2) low stable, 3) increasing, and 4) high stable. That is, two groups with changing evaluations of ethical culture, and two stable groups with different levels of ethical culture were found. Differences in psychological well-being were investigated using ANCOVA for repeated measures. The results showed that 30% of managers belonged to the pattern with relatively high and stable evaluations of ethical culture. They also had the lowest level of ethical strain and burnout, and the highest level of work engagement, which were also stable experiences. On the contrary, managers belonging to the low decreasing pattern of ethical culture (5%) experienced the highest (and increasing) experiences of ethical strain and burnout, and the lowest (and decreasing) feelings of work engagement.

Conclusion: Patterns of ethical organizational culture over a two-year follow-up time played a significant role in maintaining long-term psychological well-being. Thus, investing in ethical values and practices in organizations can decrease stress stemming from ethical dilemmas, lead to lower levels of burnout, and promote work engagement.

Coworkership as a collective process: Focus groups with employees in a Swedish healthcare organization

Caroline Bergman^{1,2}, Jesper Löve², Annemarie Hultberg¹, Katrin Skagert¹

¹*Institute of Stress Medicine, Gothenburg, Sweden,* ²*Department of Public Health and Community Medicine, University of Gothenburg, Gothenburg, Sweden*

Introduction: Workplace health promotion can be seen as an umbrella concept that includes all activities performed within the workplace, that are aimed at both promoting good health and preventing ill-health among employees. The employees' relationship to their employer and to their own work, i.e. the Swedish concept 'coworkership,' seems essential, but complex, as earlier research has indicated employees' sense of moral distress from conflicts between quality of care and prioritization of resources. In contrast to leadership, research about the concept coworkership is limited, even though the use of coworkership is entrenched in Swedish healthcare organizations. Few studies have explored coworkership as a concept in healthcare organizations, and especially from the employees' point of view. The aim of this study was to explore workplace health promotion processes through the employee's view of the concept of coworkership in a healthcare organization.

Methods: Twelve focus groups were conducted in a middle sized hospital in Western Sweden. The participants (n=68) were strategically selected to ensure coverage across different professions and units. Employees with the same profession but from different wards participated in the same focus groups. During the focus groups, a moderator performed the interviews and an assistant took field notes to complement the audio recordings. Data was transcribed and analysed using content analysis.

Results: Coworkership was viewed as a collective process that occurs within the clinical base of the hospitals' organizational hierarchy. Although the participants had different individual and professional responsibilities, they strived to achieve a common goal, i.e. to care for the patient. Reliance on colleagues' expertise and experiences and a climate of trust promoted the cooperation and quality of coworkership. Organizational factors that influenced the process were employee turnover, workload and rotation of physicians. Lean procedures and workplace meetings could improve coworkership by gathering different professions together, but were also viewed as stealing time from the "real work", i.e. direct patient work. Management was not clearly included in the participants' conceptualization of coworkership.

Conclusions: Coworkership in healthcare organizations can be defined as a collective process that is shaped around the patient. It may therefore be viewed as a workplace health promotion process in terms of sharing common goals. Continuity in staff seems to be important in order to improve the quality of coworkership. The role of management seems vague and will be further explored.

Mindfulness, emotional labour and daily well-being: A diary study

Stefan Diestel, Klaus-Helmut Schmidt

Leibniz-Research Centre of Working Environment and Human Factors, Dortmund, Germany

The present study addresses the moderating role of daily mindfulness in the positive relationship between day-specific emotional dissonance and employees' well-being. Mindfulness is conceptualized as a psychological state of moment-to-moment awareness of one's experience without judgment. On the basis of research on self-control, we predicted that mindfulness facilitates daily emotion regulation at work and thus, buffers the adverse effects of emotional dissonance, which is referred to as a perceived discrepancy between genuinely felt emotions and those as required by the job role.

To test our hypotheses, we conducted a diary study with ten working days. 71 employees from different occupational contexts agreed to participate and provided data on daily emotional dissonance (midday), mindfulness, negative affect, as well as indicators of daily psychological strain (evening), namely ego-depletion and need for recovery. In line with our predictions, hierarchical linear modelling demonstrated that the positive relationships between day-specific emotional dissonance and both indicators of daily psychological strain were attenuated as a function of day-specific mindfulness. Thus, our results facilitate the notion that mindfulness operates as a protective resource in coping with daily emotion-control demands and prevents employees from being exhausted in cases of high day-specific emotional dissonance.

New nurses' burnout and workplace wellbeing: The influence of authentic leadership and psychological capital

Heather Laschinger¹, Roberta Fida²

¹*The University of Western Ontario, London, Ontario, Canada*, ²*Sapienza University of Rome, Italy, Rome, Italy*

Purpose: This study investigated the influence of authentic leadership (AL), an organizational resource, and psychological capital (PsyCap), an intrapersonal resource, on burnout, occupational satisfaction, and workplace mental health over the first year of employment.

Background: The detrimental effects of burnout on nurses' health and wellbeing are well documented. Positive leadership is an important organizational resource for discouraging the development of burnout. AL is a leadership style that emphasizes self-awareness, honesty and transparency, behavioral integrity, and consistency. Intrapersonal resources such as PsyCap (comprised of self-efficacy, resiliency, optimism, and hope) also play a protective role against workplace stressors. Therefore we tested a hypothesized model examining the effects of AL and PsyCap at Time 1 on new graduate nurses' burnout and mental health and job and career dissatisfaction one year later.

Methods: We used data from a 2 wave survey of 205 nurses with < 2 years of experience in acute care hospitals across Ontario (T1 in 2010, response rate 37.7%; T2 in 2011, response rate 59.9%). The hypothesized model was tested using structural equation modelling in MPlus.

Results: Most nurses were female (92%), averaging 28 years of age and worked on either medical-surgical units (55%) or critical care units (23%). The hypothesized model revealed a good fit, $\chi^2(83) = 150.93$, $p < .01$; CFI = .95; TLI = .93; RMSEA = .063 (CI = .047 - .079), $p = .09$; SRMR = .061.

Discussion: Both AL and PsyCap at T1 significantly affected both burnout dimensions (exhaustion and cynicism) one year later. Specifically, the more new graduated nurses perceived their leader to be authentic, the less they experienced feelings of emotional exhaustion and cynicism. Similarly, the more new graduate nurses were confident in themselves, the less they experienced feelings of burnout one year later. Moreover both emotional exhaustion and cynicism significantly affected all three outcomes above and beyond their stability (with the exception of cynicism which did not affect mental health).

Conclusion: Our results suggest that AL and PsyCap play important roles in protecting new nurses from mental health problems by preventing burnout thereby fostering work and career satisfaction.

The social aspect in coworking spaces: Social support helps when times are hard

Cornelia Gerdenitsch, Julia Andorfer, Tabea Scheel, Christian Korunka

Faculty of Psychology, Institute of applied psychology: Work, Education and Economy, Vienna, Austria, Austria

Coworking Spaces are considered as resourceful working environments predominantly used by entrepreneurs, enabling flexible working and possibilities for social interaction. They spread rapidly with a growth rate of 245% within the last two years (Foertsch, 2013), leading to 2072 spaces worldwide, of which 878 are located in Europe. Previous research showed that the main reasons why entrepreneurs decide to work in Coworking Spaces are a social and enjoyable atmosphere, and a community which enhances the interaction with others (Foertsch, 2013).

Based on the Job Demands-Resources model (Demerouti et al., 2001; Bakker & Demerouti, 2007), the present study investigates whether social support through coworkers' experience in Coworking Spaces functions as job resource leading to work engagement and facets of job satisfaction (i.e. satisfaction with achieving objectives and with the quality of work). We conducted a cross-sectional online study with 154 European coworkers (mean age=34.86, SD=8.45). Most participants (62%) were self-employed and worked full-time in a Coworking Space (74%). Comparing the present sample with a previous one by Foertsch (2012), there is evidence for the representativeness of the sample regarding gender (67% respectively 66% male) and percentage of coworkers holding a university degree (75% respectively 79%).

As assumed, the main reason for working in a Coworking Space was social interaction (83%), followed by productivity (68%) and networking (67%). Results showed that the social support participants get from fellow coworkers within the space was positively related to satisfaction with achieving objectives ($\beta=.270$; $p=.002$), but not to work engagement. We also found a moderation effect of time pressure for the social support-satisfaction relationship. Coworkers reporting low time pressure (e.g. in times of few orders) were more satisfied with the quality of their work, when they experienced high social support by fellow coworkers. For coworkers experiencing high time pressure, social support did not affect the amount of satisfaction. This study shows that Coworking Spaces are indeed a resourceful working environment, and thus provides a valuable starting point for researching the social aspects in Coworking Spaces.

The mediating role of cognitive appraisal in the work intensification - strain relationship: Does participation buffer the negative effects?

Matea Paškvan, Bettina Kubicek, Roman Prem, Christian Korunka

University of Vienna, Vienna, Austria

Work intensification is a core demand resulting from economic and technological changes (Green, 2004; Sparks et al., 2001). Recent data from the European Working Conditions Survey indicates an overall increase in work intensity in most European countries over the last two decades (Eurofound, 2012). Employees confronted with work intensification report less job satisfaction (Brown, 2012; Green, 2004) and higher strain (Allan, O'Donnell, & Peetz, 1999; Green, 2001). Although consequences of work intensification were widely analysed, little is known about the underlying cognitive processes of how work intensification leads to negative work-related outcomes and what can be done to protect employees from the negative consequences of work intensification.

In line with the transactional-stress model (Lazarus & Folkman, 1984), we argue that the negative effects of work intensification are mainly explained by the cognitive appraisal of work

intensification. Drawing on the extended challenge hindrance framework (Webster et al., 2011) and on the JD-R model (Demerouti et al., 2001), we propose that cognitive appraisal fully mediates the relationship between work intensification and job satisfaction, and partially mediates the relationship between work intensification and emotional exhaustion. Furthermore we introduce the buffering effect of participation, as a resource (e.g. Jimmieson et al., 2004; Wanberg & Banas, 2000), on work intensification.

We tested our hypotheses using a sample of 889 ICT-employees. Results support the hypothesized mediating effect of cognitive appraisal on emotional exhaustion, coefficient = 0.31, $SE = 0.03$, 95%CI [0.25,0.37], and on job satisfaction, coefficient = -0.30, $SE = 0.03$, 95%CI [-0.37,-0.24]. Additionally employees with high participation rates appraise work intensification as less hindering, coefficient = -0.20, $SE = 0.03$. The results of the moderated mediation analyses also support the buffering effect of participation as an important resource. Our findings support the mediating effect of cognitive appraisal as assumed by Lazarus and Folkman (1984) and Webster et al. (2011). The findings suggest that participation is beneficial for employees' positive evaluation of work intensification. Given the rapid changes in modern work environments the findings underline the importance of protective factors in coping with work intensification.

Burnout and depression develop together: A study using the person-centred approach

Kirsi Ahola, Jari Hakanen, Riku Perhoniemi, Pertti Mutanen
Finnish Institute of Occupational Health, Helsinki, Finland

Burnout is a process in which the psychological resources of an employee are depleted as a consequence of prolonged work stress. Depression can be defined as a way of reacting to impossible challenges, as a melancholy mood state, or as a clinical disorder. Results regarding the relationship between burnout and depression have been mixed showing both similarities and distinctions between burnout and depression. Previous mixed findings have been obtained using a variable-centred methodology focusing on the stability of the variables. Person-centred methodology allows the dynamics between the constructs to be taken into account. We aimed at studying the development of burnout and depressive symptoms in time using a person-centred approach. We also compared baseline work characteristics of the employees in the trajectories to describe the subgroups.

The three-wave seven-year follow-up was conducted among a representative sample of Finnish dentists ($n=1,964$). We assessed burnout using the Maslach Burnout Inventory, and depressive symptoms using the short form of Beck's Depression Inventory. Job demands, job control, supervisory support, and co-operation with one's assistant were assessed as the work characteristics. We used growth mixture modelling to identify the developmental trajectories of burnout and depressive symptoms. The growth trajectories were determined by an intercept and a linear effect of time.

The values of several fit indices supported the four-trajectory solution. The largest trajectory ($n=1,310$) consisted of participants with low level of burnout and depressive symptoms. The second trajectory included 112 persons with high level of burnout and depressive symptoms. The third trajectory comprised 222 persons with increasing level of burnout and depressive symptoms. In the fourth trajectory ($n=320$), the levels of burnout and depressive symptoms decreased over time.

Baseline work characteristics differed between the four trajectories. In the "low" trajectory, the level of job demands was lower and the levels of job control, supervisory support, and co-operation with assistant higher than among the rest. Dentists in the "increasing" trajectory had lower job demands at baseline than those in the "high" or "decreasing" trajectories. Dentists in the "high" trajectory had lower baseline job control than those in the "increasing" or "decreasing" trajectories. Dentists in the "high" trajectory had a lower level of co-operation with assistant at baseline than those in the "decreasing" trajectory.

When studied using a person-centred approach, burnout and depression seem to develop in tandem, supporting similarity between the constructs. The quality of psychosocial work characteristics was reflected in the development of the symptoms.

Smartphone use and work-home interference: The moderating role of social norms and work engagement

Daantje Derks, Maria Tims, Arnold Bakker

Erasmus University Rotterdam, Rotterdam, The Netherlands

Work in our modern society facilitated by communication technology involves connectivity, immediacy and a blurring of boundaries between work and non-work domains. The present four-day diary study ($N = 100$ employees, $N = 367 - 400$ data points) aims to shed more light on the relationship between daily smartphone use in the evening and daily work-home interference (WHI). Additionally, two potential moderators of this relationship are examined: (1) social norms represented by the influence of colleagues and employers regarding availability after work hours; and (2) work engagement.

The results of multilevel modeling showed that smartphone use in the evening was related to more WHI. As hypothesized, employees who felt pressured by their colleagues and their employer to stay connected to work after work hours and used the smartphone more frequently, experienced more WHI than employees without this pressure. In addition, consistent with the recovery literature, on days when employees used their smartphone more intensively, non-engaged employees experienced more WHI than engaged employees. The results suggest that employers should be clear about their expectations regarding smartphone use in private hours. In addition, we conclude that engaged workers are best able to detach from their work.

A psychophysiological explanation of diminished performance under mental fatigue

Jesper F. Hopstaken¹, Dimitri van der Linden¹, Arnold B. Bakker^{1,3}, Michiel Kompier²

¹Erasmus University, Rotterdam, The Netherlands, ²Radbout University, Nijmegen, The Netherlands, ³Lingnan University, Hong Kong, Hong Kong

Background: Mental fatigue is a common phenomenon in daily life and strongly related to occupational safety and health. For example, fatigue often has a negative impact on work performance. Despite its relevance for occupational health research, little is known about the underlying psychophysiological mechanisms that are involved.

Aims: In our studies, we aim to provide new insight into these psychophysiological mechanisms. Specifically, we test the involvement of the locus coeruleus-norepinephrine (LC-NE) system. The locus coeruleus is a part of the brain that is involved in the regulation of attention and is sensitive to cost-reward tradeoffs of task engagement. It is the most important source of cortical norepinephrine (NE). The levels of NE in the brain define whether an individual is engaged in a task. If these levels become suboptimal, individuals disengage from a task. In our studies, we hypothesize that the level of locus coeruleus NE plays an important role in explaining fatigue-related effects on performance.

Method: We use different presumed psychophysiological markers of the LC-NE system: pupil diameter and dilation and the P3 event related potential. Participants worked on a n-back task for two hours to invoke mental fatigue. During the two experiments we used subjective, behavioral (performance) and psychophysiological (P3 and pupil) measures to assess fatigue and fatigue effects with increasing time-on-task. After two hours on the task we manipulated the rewards for performing well on the task, to investigate whether these effects are reversible.

Results: Analyses showed that with increasing time-on-task, subjective fatigue, performance, P3 amplitude and pupil dilation declined. After increasing the rewards of the task, all of these

measured reverted to higher levels. Multilevel analysis of the data showed a within-subjects correlation between subjective fatigue, performance and the indicators of the LC-NE system during the time-on-task blocks of the task.

Conclusion: The present studies provide support for the central role the LC-NE system plays in the relationship between mental fatigue and performance. Implications of these studies are clinical as well as applied in society and organizations. Knowledge of the psychophysiological correlates of mental fatigue may contribute to research on disorders where (mental) fatigue is a major symptom (depression, Parkinson's disease, burnout). Also, these results may have a strong impact on productivity and safety, as there are many industries where mental fatigue is in the top-list of factors contributing to incidents and accidents.

Work-based learning: Development and validation of a scale measuring the learning potential of the workplace (LPW)

Irina Nikolova¹, Joris Van Ruysseveldt¹, Hans De Witte², Karen van Dam¹, Jef Syroit¹
¹Open University, Heerlen, The Netherlands, ²KU Leuven, Leuven, Belgium

In this study we developed and tested a taxonomy intended to tap into different aspects of work-based learning. We strived to create a parsimonious (using only twelve items) yet multi-dimensional instrument that can be applied across various occupational settings. Work-based learning in this study refers to processes by which employees acquire new or develop further their existing knowledge, skills, abilities, and other characteristics (KSAOs) through engaging in workplace participatory practices.

Based on a comprehensive literature review we identified two key aspects of work-based learning: interactional ("learning from others") and task-based (cognitive-behavioral) learning. Through engaging in interactions with the immediate social environment (i.e. colleagues and supervisor) employees can craft their learning by actively creating opportunities for obtaining valuable KSAOs. Additionally, task-based learning (or learning through reflection and learning through experimentation) can be an important indicator of employees' workplace learning.

Hence, we created a four-dimensional theory-driven taxonomy that measures work-based learning through four distinct factors: learning through reflection, learning through experimentation, learning from the supervisor, and learning from colleagues. The psychometric characteristics of our instrument were examined among a sample of Dutch employees working in different organizations (N = 1,013). In this study we examined the factorial structure and validity of the LPW-scale by conducting Confirmatory Factor Analyses, testing for measurement invariance and determining the scale's reliability. Subsequently, the LPW-instrument was cross-validated using SEM (AMOS 20.0). Convergent, divergent, and construct validity were investigated as well.

The results obtained from the CFA as well as from the measurement invariance test provided a strong empirical support for the theory based four-factor structure of the LPW-scale. Good convergent, divergent and construct validity of our instrument were also established. In conclusion, the results obtained in this study provided solid evidence that this new measure for work-based learning possesses has good psychometric properties.

A longitudinal analysis of employee functioning in contexts of workplace bullying: The role of psychological need frustration

Sarah-Geneviève Trépanier¹, Claude Fernet², Stéphanie Austin²
¹Université du Québec à Montréal, Montréal, Canada, ²Université du Québec à Trois-Rivières, Trois-Rivières, Canada

Drawing on self-determination theory (SDT; Deci & Ryan, 1985, 2008), this study aims to provide insight into the temporal relationship between workplace bullying and employee psychological (i.e., burnout) and professional functioning (i.e., turnover intention). Specifically,

the study proposes that exposure to workplace bullying (e.g., persistent criticism, excessive teasing or social exclusion) undermines employee functioning over time because it frustrates employees' psychological needs for autonomy (i.e., acting out of a sense of volition), competence (i.e., feeling capable of mastering one's environment), and relatedness (i.e., having significant interpersonal relationships).

A total of 699 nurses from Canada took part in this two-wave study conducted over a 12-month period. Results from cross-lagged analyses largely support the proposed sequence. That is, T1 exposure to workplace bullying positively predicted T2 frustration of the needs for autonomy and relatedness. T1 workplace bullying also positively predicted T2 burnout and T2 turnover intention. When taking into account these cross-lagged effects (T1 bullying on T2 indicators of employee functioning), T1 frustration of the need for competence positively predicted T2 burnout, while T1 frustration of the needs for autonomy and relatedness positively predicted T2 turnover intention.

These results contribute to the current paucity of studies investigating the psychological mechanisms underlying the temporal relationship between workplace bullying and employee functioning. Indeed, the results suggest that exposure to workplace bullying undermines employees' desire to stay in their current job (i.e., turnover intention) because it fosters feelings of oppression (i.e., frustration of the need for autonomy) and rejection (i.e., frustration of the need for relatedness). From a practical standpoint, the results highlight the importance of supporting all three of employees' psychological needs in contexts of bullying because they distinctly contribute to employees' psychological and professional functioning over time.

Change in job control and supervisor support on change in cognitive and physical vigor: Differential effects for immigrant and native employees in Israel

Vivian Schult¹, Annekatri Hoppe¹, Sharon Toker²

¹Humboldt-Universität zu Berlin, Berlin, Germany, ²Tel Aviv University, Tel Aviv, Israel

Aim: The aim of this study was to investigate whether change in job resources, i.e. job control and supervisor support, positively affected change in cognitive and physical vigour. Furthermore, we explored group differences in the relationship between job resources and vigour between Eastern European immigrant employees in Israel and native Israeli employees who performed similar jobs.

Method: At two points of measurement with a one year time lag, 389 immigrant and 389 Israeli employees who were matched on various job characteristics filled in a survey. Based on the longitudinal data, a combination of latent - change score and multiple group analysis approach was used to compare the effect of job resources on vigour across Israeli and immigrant employees.

Results: Results for the full sample revealed positive associations between baseline job control as well as change in job control on change in cognitive and physical vigour. However, when comparing groups we found that baseline job control and change in job control on change in cognitive vigour was significantly stronger for native Israeli employees compared to immigrant employees. For the full sample, change in supervisor support positively affected change in physical vigour. No group differences were found for this relationship.

Conclusion: The findings are in line with previous research on immigrant workers in Western countries in showing stronger effects of job control for native than for immigrant employees. This implies that cultural values and previous work experience affect the evaluation of, and the need for, job control. The different associations of job resources with cognitive and physical vigour will be discussed.

Personality and burnout among Malaysian HR managers: The mediating role of emotional labour

Michael Mustafa, Angeli Santos, Terk Chern Gwi

The University of Nottingham Malaysia Campus, Semenyih, Malaysia

Positive employee attitudes and emotions alongside interpersonal interactions have been identified as critical for both individual and organizational performance (Ashkanasy et al., 2002). At the same time, emotional labour or the process of regulating one's emotions in line with organizational display rules during service encounters, has been associated with burnout (Bono & Vey, 2005, Grandey, 2000; Kim, 2008). Although individual differences have been identified as critical for job performance among service workers, their effect on emotional labour remains poorly understood (Bakker et al., 2006; Gallardo-Pujol et al., 2009). Furthermore, research investigating emotional labour, its antecedents and consequences among internal service workers is lacking (Allen et al., 2010).

As critical internal service providers, HR managers are required to engage in extensive interpersonal interaction with a variety of internal client groups (Frost, 2007; Torrington et al., 2011). Contemporary HR managers are increasingly finding themselves dealing with a range of business and people issues (Ulrich et al., 2007). In dealing with these challenges, HR managers are expected to be empathetic and impartial and comply to organizational display rules, especially in dealing with the toxic emotions of others (Metz et al., 2012). Such frequent emotional demands can lead to burnout and thus has broader implications for the selection of HR managers. Therefore, we see an urgent need to better understand emotions, personality and burnout among HR managers.

Using on a sample of 136 HR managers, we test whether surface and deep acting mediate the relationship between the big five personality traits and burnout. Results indicate that the big five personality dimensions had different effects on the three dimensions of burnout as well as on both deep and surface acting. Regarding the mediating effects, surface acting mediated the relationship between extraversion, emotional stability and openness on personal-related burnout, and between extraversion and openness on work-related burnout. No mediating effects for deep acting were found.

The findings from our study contribute to personality and emotional labour research as well as the literature on HR managers. Firstly, we contribute to a better understanding of the personality profile of employees involved in jobs with high emotional labour (Baker et al., 2006). Secondly, we extend the generalizability of the emotional labour concept by investigating it with respect to internal, as opposed to external service workers. Finally our study addresses the call by Metz et al. (2012) to use emotions to better understand burnout among HR managers. Practical implications are also discussed.

Cooperative or uncooperative patients: Factors of variations in activity of healthcare providers in two French emergency wards

Sandrine Schoenenberger^{1,3}, Pierre Moulin², Eric Brangier³

¹LEG - University of Burgundy, Dijon, France, ²INSERM - Kremlin Bicêtre, Paris, France,

³PERSEUS - University of Lorraine, Metz, France

In this paper, we show that a part of the variation of healthcare providers' activity depends on patients' collaboration. Some difficult and stigmatised patients need important care (technical and relational; Vega, 2000) which can increase the workload of healthcare providers: for example, using translator web sites when healthcare professionals and patients don't share a common language (Schoenenberger, Moulin & Brangier, 2013). As such, to protect themselves against such workload increases, healthcare providers can change the care process (Hervet, Blatter & Vallery, 2006). The aim of this study is to compare variations of activity according to the cooperative vs. uncooperative character of patients.

120 observations of health situations in two emergency wards were made. These were coupled with a questionnaire which was intended to characterise patients. The main results indicated two types of healthcare variations. On the one hand, a decrease of care for patients who are judged complicated and uncooperative (i.e. asking them less questions, $r_s = -0.247^{**}$). On the other hand, a consolidated care for patients who are evaluated difficult but cooperative (i.e. more jokes for patients with a physical handicap, $r_s = .272^{**}$), while medical tasks don't vary. These results open a debate on the meanings of work variations amongst healthcare providers and question potential interventions for all the patients who might be treated in a consistent way.

12-hour or 8-hour shifts: Effects on perceived fatigue and burnout by healthcare providers

Sandrine Schoenenberger¹, Daniel Gilibert², Ingrid Banovic³

¹LEG - University of Burgundy, Dijon, France, ²INTERPSY - University of Lorraine, Nancy, France, ³Laboratoire de Psychologie Clinique - University of Paris X, Paris, France

The aim of this research is to examine the consequences of working hours on perceived fatigue and burnout among healthcare providers in a French hospital. Literature is divergent about the effects of a 12-hour shift on health, sleep and satisfaction at work. Depending on the context, some researchers state 12-hour shifts are better than 8-hour shifts (e.g. Mitchell & Williamson, 2000), while for other research it is the opposite (e.g. Yamada et al., 2001). Likewise for healthcare providers, this divergence is also present. However, Capraro, Meyer and Sueur (2009) found the positive effect of 12-hour shift, with the positive effect stronger if healthcare providers have enough rest days.

In conformity with such research, the present study hypothesizes that healthcare providers in a 12-hour shift perceive better health than healthcare providers in an 8-hour shift. In order to test this hypothesis 255 healthcare providers answered a survey questionnaire; 215 in a 12-hour shift and 40 in an 8-hour shift. The questionnaire contained scales commonly used in Work and Health Psychology: MBI (Maslach Burnout Inventory), ISI (Insomnia Severity Index), MFI (Multidimensional Fatigue Inventory: fatigue, reduction of everyday activities) and SF-36 health survey.

On the one hand, our results don't show any difference between 12-hour shifts and 8-hour shifts for burnout, insomnia and the reduction of everyday activities. On the other hand, healthcare providers in 12-hour shifts are less weary than healthcare providers in 8-hour shifts.

During 12-hour shifts, healthcare providers have more days off so they have more time to recover (Capraro, Meyer & Sueur, 2009). Besides, regardless of the working hours, people are less stressed when they can choose their working hours (Carr, Gareis & Barnett, 2003).

The present study concludes that 12-hour shifts are not prejudicial for healthcare providers, if some precautions are set up:

- 4 days off a week,
- A maximum of 2 successive days at work,
- The healthcare provider must volunteer to work in a 12-hour shift.

A leadership perspective on safety communication

Malin Mattson¹, Johnny Hellgren¹, Sara Göransson^{2,1}

¹Stockholm university, Stockholm, Sweden, ²FeelGood, Stockholm, Sweden

In many of today's organizations, there is a growing concern regarding workplace safety. As a result of this, there is an increase in organizational activities aimed at enhancing the employees' safety awareness' and eliminating organizational factors that may lead to the employees being exposed to risks.

Communication is considered a vital aspect of the functioning and success of an organization, and is potentially relevant even in a workplace safety context. However, there are gaps in research regarding the ways in which a leader's communication with his or her subordinates could affect safety at the workplace.

The question in the present study is how and in what way a leader's communication with his or her subordinates (e.g. in the form of feedback, communication of safety values, and openness in dialogues) relate to safety issues such as perceived safety and safety behaviors.

Questionnaire data was collected from a ward belonging to an emergency hospital operating in a rural area in Sweden. The data will be analyzed using structural equation modeling.

The results will be described and discussed in terms of theoretical implications relating to the linkage between a leader's communication with his or her subordinates and safety, as well as in terms of practical implications for policy-makers and managers. The paper highlights the importance of taking leadership communication into account in the pursuit of increasing workplace safety.

Assessing the efficacy of a 4-week internet-based mindfulness intervention to reduce work-related rumination and fatigue: A waitlist control study

Dawn Querstret, Mark Cropley

University of Surrey, Guildford, Surrey, UK

Objectives: Previous research has shown that work-related rumination - specifically that which is negatively emotionally valenced (affective rumination) – may be causal in a model of work-related fatigue. This may be because affective rumination maintains psychophysiological arousal, interfering with recovery processes (e.g., sleep). Developing interventions to reduce affective rumination may enable individuals to more effectively recover when they are not at work. This waitlist control study assessed the efficacy of a 4-week Internet-based mindfulness stress reduction course for the reduction of work-related rumination and fatigue. This online intervention has previously been shown to be effective in the reduction of depression, anxiety and general stress.

Methods: Participants (N=81) who reported moderate to high levels of affective rumination were randomly allocated to either the intervention (INT; N=41) or waitlist control (WLC; N=40) group. Participants completed a 4-week online (web-based) mindfulness stress reduction intervention; in which they committed approximately 2 hours per week to completing online mindfulness training and practising learned techniques at home. We assessed levels of affective rumination and fatigue in all participants at 4 time points (pre-treatment, post-treatment, and at 3 month and 6 month follow-up); and WLC participants also completed a baseline assessment at the time that the INT group commenced their online course. In order to incentivise participation and course completion, participants were reimbursed for their time with vouchers at various points throughout the study (£50 per participant in total).

Results: We found that participants in the INT group reported significantly lower levels of affective rumination and fatigue at post-treatment in comparison to the WLC participants. Follow-up data will be available in due course.

Conclusions: Online mindfulness interventions may provide a cost effective way for organizations to help employees reduce affective rumination and work-related fatigue.

Childhood experiences and well-being in UK trainee clinical psychologists: A mixed methods analysis.

John Galvin, Andy Smith
Cardiff University, Cardiff, UK

It has been suggested that the motivation behind the occupational choice of clinical psychologists could include the desire to resolve personal psychological distress from childhood or the need to continue the caretaking role the individual has already taken on in their family. For example, Elliott and Guy (1993) found that qualified female psychologists reported more problems in their personal and home life compared to other professionals. These problems included physical and sexual abuse, psychiatric history, and greater dysfunction within their families.

The present PhD research focuses on the relationship between the personal and professional life of UK trainee clinical psychologists (n=160). Qualitative and quantitative research methods have been adopted to achieve this aim. Results show that trainee clinical psychologists report more adverse childhood experiences than other groups in training. Additionally, these experiences are significant predictors of wellbeing at work. The implications of these findings for both practitioner health and clinical practice will be discussed.

Organizational interventions to improve wellbeing: A comparison of change processes in different work cultures

Virginie Althaus¹, Vincent Grosjean², Eric Brangier¹, Nadja Formet¹

¹*University of Lorraine, Metz, France*, ²*National Research and Safety Institute (INRS), Nancy, France*

Introduction: Organizational interventions aimed at improving well-being have been widely discussed. It is important to question the effectiveness of such interventions and to take the context into account. The success of a method also depends on the type of company the intervention is in, and its culture. This raises the question of how we should categorise companies in order to find intervention methods that would be tailored to their needs.

Sociology provides typologies of organizations that could be useful. The cultural approach (Osty, Uhalde, & Sainsaulieu, 2007) seems to be a good starting point to understand how organizational characteristics could fit the intervention method the present study wanted to apply. In the present case, the intervention method developed was based on systems thinking (Jackson, 2000). Two business cultures were examined: bureaucratic and entrepreneurial (Osty et al., 2007).

Method: Interventions were carried out in five small and medium-sized companies. Two companies corresponded to the entrepreneurial model and the three others to the bureaucratic model. A multiple-case study design (Yin, 2009) was chosen to compare the cases. This enables the comparison of change processes, the level of participation of workers, and the results obtained in each of the interventions. These were followed by interviews to evaluate them. These interviews were focused on the participants' representations (as in Randall, Cox & Griffiths, 2007).

Results: The sociological framework enables the differentiation of the effectiveness of intervention processes as well as the level of success at reaching the initial goal of transforming working situations. In entrepreneurial structures, changes have been implemented before or upon departure of the consultants. In contrast, in bureaucratic environments, it took at least five months to implement the first improvements. These fast-paced changes in entrepreneurial structures can be explained by the participation strategy mobilised by systemic intervention: changes are introduced on the base of spontaneous initiatives of the teams and their managers. In bureaucratic settings, obstacles faced related to

the fact that the change initiatives of the employees no longer appeared as legitimate, despite the logic of the systemic intervention which promotes empowerment. These results help design the intervention process by taking into account the characteristics of companies where it takes place.

From experience to action: How emotions and moral disengagement predict disruptive behaviours by nurses

Roberta Fida¹, Marinella Paciello², Carlo Tramontano³, Gaia Urso¹

¹Sapienza University of Rome, Rome, Italy, ²Uninettuno Telematic International University, Rome, Italy, ³Leonard Cheshire Disability and Inclusive Development Centre, UCL, London, UK

Several studies have shown the vicious circle between aggressive (i.e. bullying) and counter-aggressive behaviours at work, suggesting that this link is neither simple nor automatic. In fact, being a victim of bullying at work is a necessary but not necessarily guaranteed condition for enacting aggressive behaviours in response. Previous findings suggest that further research on the role of both affective and cognitive systems of personality is necessary to better understand the circumstances in which workers with a history of aggressive and frustrating experiences engage in aggressive behaviours.

The present study offers an integrated perspective by investigating concurrently the role of negative emotions experienced in relation to work, and moral disengagement – namely cognitive mechanisms that permit dedicated workers to enact disruptive behaviours without incurring self-sanctioning reactions. Both of these constructs are well-studied in the work and organizational literature and are theoretically well-grounded within their respective frameworks of Spector and Fox's Stressor-Emotion Model and Bandura's Theory of Moral Agency.

Being repeatedly the victim of workplace bullying is common in stressful work environments that contribute to employee frustration in accomplishing career goals and can lead workers to feel negative emotions with which they need to cope. Enacting counter-aggressive work behaviours is one of several likely coping strategies under these conditions. However, such conducts are *proactive* rather than *impulsive*: workers will need to rely upon cognitive mechanisms that temporarily release personal "moral ties" that usually prevent them from adopting dysfunctional behavioural responses.

In sum, we hypothesize that the more that workers experience negative emotions in reaction to bullying the more they will enact counter-aggressive behaviours through moral disengagement. We analysed the process from bullying to counter-aggressive behaviours in a sample of 438 Italian nurses, given the characteristics of the healthcare system, as well as the possible implications and consequences of work behaviours that are not in line with nursing practices and ethical codes for individuals, organizations and patients.

The results of SEM confirm that being the victim of bullying can lead to disruptive behaviours that target co-workers, as well as the organization as a whole, through negative emotions and moral disengagement. In particular the more nurses are the victims of bullying the more they will experience negative emotions, which lead to the increase of self-serving mechanisms that facilitate counter-aggression in their workplace.

This study can be of particular importance for designing interventions that are aimed at preventing the escalation unethical behaviours in the workplace.

What does workload really mean for executives: An exploratory analysis

Hazem Ben Aissa¹, Narjes Sassi²

¹*Université Paris-Sud, Paris, France,* ²*Institut Supérieur de Gestion, Paris, France*

As stress and burnout have become major concerns in organizations, considerable research has tried to identify factors - individual or organizational - that cause these psycho sociological risks. Among the organizational factors, workload seems to be the most important stressor that damages employee well-being and reduces performance (Cooper, 2009). While this stressor is fairly common, research points out some ambiguities about its components and definition (Jex, 1998, Spector, et al., 1988). Thus, the objective of this paper is to address this neglected area of workload research and further understanding of its components and specificities.

It appears from the literature that this issue has not yet been adequately clarified with regards to two major points: Firstly, the extent to which actual workload corresponds to what is formal and prescribed in the employment contract, and how this is perceived by employees. However, studies dissociate mostly between these three levels of workload and measures deal predominantly with either one or another of these components.

Secondly, measures to evaluate workload include three dimensions: working time, hardness (physical and mental) and relations with others. These dimensions are not always adequate to understand workload with specific occupations, e.g. Executives. This occupational category is submitted to a management skills model which encourages individual performance and enhanced competence development and competitiveness. In this context, the traditional workload measure may be inoperative as it doesn't tackle performance pressure.

In regard to these issues, this paper aims to contribute to a better definition of perceived workload by Executives and to develop a more accurate measure. To reach these goals, and in accordance with Churchill's paradigm (1979) the first step of this study involves exploratory research. Thus, 22 interviews were conducted with 22 executives working in companies that adopt a management skills model. The data was analysed using "contact summary sheets" (Miles & Huberman, 1994).

The results provided insights about the composition of workload among Executives. They reported that their workload was both increased and extended, leading to a more complex perceived workload. Significantly, complexity was shaped by the attempt to which Executives try to maintain their performance level while adapting to the organizational constraints. Consequently, four dimensions were found to grasp the meaning of this stressor; time pressure, work hardness, work partners requirements, and competence pressure.

These first results will be followed by an ongoing step of items generation that will be submitted for peer and expert validation.

Safety climate and occupational accidents and injuries: Differences among permanent and contingency workers

Sara Leitao, Birgit Greiner

University College Cork, Cork, Ireland

Background/Aim: Employment and work characteristics have been subjected to fast pacing changes in current times. With this, new diverse types of contractual arrangements have arisen. It has been argued that employment status might be linked with workers' perceptions of safety and health, their safety behaviour and, ultimately, with the health and safety performance of companies. Research has, in fact, evidenced that contingency workers have less positive safety attitudes, lack confidence in the "host organization" and have greater safety concerns than permanent workers. Hence this study looks into the possible impact of employment status on the safety perceptions (safety climate) and accidents and injuries experienced by both permanent and contingency workers in an organization.

Methods: A survey was distributed to all of the 367 workers (permanent and contingency) in an Irish chemical plant and a response rate of 66.4% was achieved. The “Safety Climate Toolkit” from Loughborough University (Cox & Cheyne, 2000) was applied to collect information regarding individuals’ safety climate perceptions and their past accidents or injuries experienced as workers for the plant under study. Logistic regression modelling (adjusted for age and gender) was performed to study the association of safety climate and employment status with accidents/injuries at work.

Results: Significant associations were found between accidents/injuries and some of the safety climate dimensions for all workers (e.g.: Management Commitment (OR=1.103;95% CI 1.011-1.203) and Work Environment (OR=1.142, 95% CI 1.033-1.262)). Variations in the probability of experiencing accidents and injuries were noticed among the two types of employment status where contingency workers seem 3.16 times more likely to experience accidents/injuries than permanent workers (OR=3.16, 95% CI 1.36-7.33).

Conclusion: Employment status may influence the perceptions workers have on the safety climate of their organization and hence might affect their safety behaviours. Thus, the diversity of employment types held by workers in a plant, particularly contingency workers, require particular attention when managing health and safety in an organization and the maintenance of workers’ wellbeing.

Brief Motivational interviewing for healthy eating and physical activity training for health and community staff

Peta Stapleton, Elizabeth Scott

Bond University, Gold Coast, QLD, Australia

Brief motivational interviewing (MI) has proven a successful intervention with vulnerable groups in changing a range of health behaviours (from reducing alcohol problems in lower socio-economic status groups to increasing fruit and vegetable intake in young people and culturally and linguistically diverse groups).

This project was designed to train 78 staff in organizations from the health and community sector that provide support to at-risk groups in brief motivational interviewing techniques, specifically in relation to healthy eating and physical activity. Training consisted of two hours of theory focused on the spirit of brief motivational interviewing, followed by 2 x two hour blocks of practical training using simulated patients/ clients. Training also included information regarding local resources and systems to support practical implementation by attendees. An electronic support system was also provided for 6-months post-training to enable group discussion and shared learning. The brief motivational interviewing component was assessed pre and post-training, and at 3-month follow-up.

Participants’ confidence in using MI with clients significantly improved pre- to post- ($p<0.05$), and remained significantly improved at 3-month follow-up ($p<0.05$). Participants’ understanding of the principal knowledge in MI significantly improved from pre-to post ($p<0.05$) and remained significantly improved at 3-month follow-up ($p<0.05$). This was relative to a matched control group of health professionals who were not trained in MI. Trained MI facilitators who assessed participants’ skill during the simulated patient interactions indicated a significant improvement across the two training blocks ($p<0.05$).

More carrot, less stick: Exercise, leadership styles and changing attitudes to work

Matthew Jenkinson, Prudence Milllear

University of the Sunshine Coast, Maroochydore, Queensland, Australia

The benefits of physical exercise to physical and mental health and well-being are widely accepted. Within the workplace, more physically active employees are often happier and more productive. As such, many organizations provide facilities for their employees to be active

during work hours, but these facilities often have low rates of usage. Whilst it may seem advisable to make some form of exercise mandatory, this move may be counterproductive. In contrast, research into leadership shows that transformational leadership can make unpopular tasks or decisions more acceptable, and more likely to be implemented.

The present study used short vignettes to assess how job satisfaction and organizational commitment would change should an exercise program (walking at lunchtime) be introduced at the participant's workplace. The variations were Mandatory, Voluntary, or Unsupervised participation, under three leadership styles (Authoritarian, Laissez-Faire, and Transformational). Participants rated their current job satisfaction and organization commitment, before rating the randomly ordered vignettes. Participants rated what their job satisfaction and organizational commitment would be in that situation.

Repeated measures ANOVAs compared the leadership by exercise program interactions separately for job satisfaction and organizational commitment. For both outcomes, the interactions and the main effects were significant. For the main effects, regardless of the exercise program, transformational leadership increased both job satisfaction and organization commitment. Similarly, regardless of leadership style, mandatory exercise programs had the greatest negative impact. For the interactions, the worst outcomes came from combining mandatory exercise and authoritarian leadership, best for all combinations with transformational leadership but for laissez-faire leadership, voluntary exercise gave better outcomes than either mandatory or unsupervised exercise.

Simple main effects for transformational leadership showed mandatory exercise significantly reduced both outcomes over voluntary or unsupervised exercise (i.e., $M-T < V-T$ and $U-T$). Simple main effects for mandatory exercise showed each leadership style was significantly different from each other (i.e., $M-A < M-LF < M-T$). Current levels of job satisfaction and organizational commitment were very similar to those for M-T and using the same simple main effects showed mandatory exercise with authoritarian leadership substantially reduced both outcomes when compared to current attitudes to work. Interestingly, current levels were less than expected to occur with unsupervised exercise with transformational leadership.

Employers considering implementing an exercise program should be wary of enforcing participation in exercise. Unless these programs can be assured of transformational leadership to encourage and support employee participation, it is likely that their employees' job satisfaction and organization commitment will be substantially reduced.

The effectiveness of manual handling training on knowledge transfer to employees, behavioural change and, subsequent reduction of work-related musculoskeletal disorders: A systematic review

Dervla Hogan¹, Birgit Greiner¹, Leonard O'Sullivan²

¹University College Cork, Cork, Ireland, ²University of Limerick, Limerick, Ireland

Background: The rationale for this research was the high prevalence of work-related musculoskeletal disorders (WRMSDs) in the workplace. WRMSDs are the most common cause for long term absence from work and have been labelled an epidemic. WRMSDs can be caused or aggravated by many physical (poor manual handling) and psychosocial hazards. Therefore, to determine the effectiveness of manual handling training, a holistic approach must be taken which allows evaluation beyond the physical risk factors. Hence, this systematic review investigated the effectiveness of manual handling training at transferring knowledge to employees, leading to a positive change in employee's manual handling behaviour and, ultimately, a reduction of WRMSDs.

Methods: Six electronic databases were searched for peer reviewed journal articles in the English language. The study design of all eligible papers had to be randomised controlled

trials, non-randomised controlled trials or cohort studies with a control and/or comparison group which investigated the effectiveness of manual handling training. Thirteen articles met the inclusion and exclusion criteria. Following quality assessment, nine of the included articles were found to be high quality. Narrative synthesis was completed on the findings of each paper.

Results: Of the 13 included studies, five provided information relating to knowledge transfer to employees and behavioural change for both the intervention and the control group. Another four of the 13 included studies, provided data only from trained participants as evidence of knowledge transfer to employees and behavioural change. A large percentage of participants, within these four studies, (73% to 94%), indicated that the training had a positive effect on the manual handling tasks completed in their daily work. The final four included studies did not report results relating to evaluation of knowledge transfer to employees and behavioural change. In relation to reduction of WRMSDs, seven of the 13 included studies showed no significant association between manual handling training and reduction of WRMSDs, three showed a partial association and two showed a significant association.

Conclusions: This systematic review suggests that there has been very little research focusing on the effectiveness of manual handling training on knowledge transfer to employees and behavioural change. The findings indicate that whilst employees report understanding and awareness following training, this does not always lead to the expected behavioural change. This review also suggests it cannot be demonstrated that knowledge transfer to employees will lead to a reduction of WRMSDs.

Are my co-workers' breaks associated with my psychological distress? A multilevel study among hospital patient-care workers

David Hurtado¹, Maria Glymour², Silje Reme^{3,1}, Lisa Berkman¹, Glorian Sorensen¹

¹Harvard School of Public Health, Boston, MA, USA, ²University of California, San Francisco, CA, USA, ³Oslo University Hospital, Oslo, Norway

Background: The ability to take frequent breaks, especially for meals, is a relevant and modifiable organizational factor that may affect the health and well-being of health-care workers. Although several occupational regulations enforce employers to offer both meal breaks and rest periods, breaks may not be uniformly distributed within organizations.

Aims: To examine differences in the ability to take a full meal break, and to test if more breaks are associated with psychological distress among 1,492 hospital patient-care workers, nested in 104 units (work groups).

Methods: Policy availability was reported at the individual (yes/no), and unit-level (percentage of agreement). Flexible practices included individual usage (Z-scores), unit or aggregated means, co-workers', or the average of unit-mates, and intra-unit or the individual deviance relative to the unit average. Psychological distress was measured with the K6 questionnaire.

Results: Forty percent of the workers reported not being able to leave their work unit during meal breaks. However, 55.9 percent of the sample left the unit at least sometimes and nearly two thirds have taken a full meal break during the last year, either sometimes or often or always. Reports of policy and practices reports statistically significantly varied across units, and around a quarter of the likelihood of reporting whether workers were allowed to leave their units for a meal breaks depended on the unit ($\sigma^2=1.08$, $p < 0.05$, Intra-class correlation [ICC] =0.24), and around a third of the variance of meal break practices was attributable to unit clustering ($\sigma^2=0.26$, $p < 0.05$, ICC=0.37). After adjusting for individual level covariates, psychological distress was higher among workers who reported not being allowed to leave their units to have a full meal-break ($\beta = 0.01$, $p < 0.05$). Higher individual use of meals breaks was associated with lower distress ($\beta = -0.10$, $p < 0.05$), but co-workers' breaks with higher ($\beta = 0.07$ $p < 0.05$).

Conclusion: The ability to take meal breaks had positive or negative links with distress depending on the level. Individual meal breaks may be positive for mental health, but coordination of demands or social norms related breaks could explain the link of co-workers' breaks and higher distress.

Job control, task-related stressors, and social stressors: Identifying groups with different developmental patterns in these variables, and predicting psychological and physical well-being by group membership

Ivana Igic¹, Norbert Semmer¹, Anita Keller¹, Achim Elfering¹, Wolfgang Kälin¹, Franziska Tschan²

¹University of Bern, Bern, Switzerland, ²Université de Neuchâtel, Neuchâtel, Switzerland

Cumulative effects of working conditions on health and well-being have been reported repeatedly; however, changes over time have also found to be important. We 1) identified groups with different trajectories of job control, task-related and social stressors (simultaneously) and 2) predicted well-being and health by group membership.

Method: We used data of the N = 483 participants (spanning 10 years; Nt1 = 1394) of the "Work Experience and Quality of Life in Switzerland" study (Semmer et al., 2005). Task-related stressors, job control (ISTA; Semmer et al., 1999) and the social stressors (Frese & Zapf, 1987) were the predictor variables. Outcome measures were irritation (Mohr et al., 2006), job satisfaction (Baillod & Semmer, 1994), and BMI. Trajectories of working conditions were determined by Growth Mixture Modeling (GMM). We then tested if outcome variables at t5 differ between those trajectories, adjusted for the baseline value of the respective outcome (ANCOVA). To determine to what extent results were due to trajectories vs. current working conditions (short-terms effects), we compared these results to an analysis in which predictors in t5 were controlled as well.

Results: We decided for a five-class model. Two of the smallest classes were characterized by the least favorable constellation of the level and development of work characteristics over time: The "*high strain class*" was characterized by increasing social and task-related stressors and by decreasing job control over time. The "*active job & high social stressors*" class was characterized by high job control and high job demands as well as by high social stressors. When adjusted for the base level of the respective outcome variable the effect of class membership on all outcomes was significant. Pairwise comparisons revealed that "*active job & high social stressors*" class were significantly associated with a higher level of irritation and BMI, and lower level of job satisfaction compared to the more "favorable" groups. The "*high strain class*" showed the same effects for job satisfaction. Most effects also held when predictors at t5 were controlled as well.

Theoretical implications and conclusions: Although classes with unfavorable trajectories were small, their well-being at t5 was lower than that of more favorable classes. Adjusting the level of predictors at t5 represents a rather strict test; it shows that not only short-term exposure (level of predictors at t5) but also preceding developments were important. Our results also suggest that social stressors at work are especially important and can offset effects of job demands and control.

Linking job demands to partner's mental detachment and exhaustion: Social support seeking as a crossover mechanism

Sara Tement^{1,2}, Christian Korunka²

¹University of Maribor, Faculty of Arts, Department of Psychology, Maribor, Slovenia,

²University of Vienna, Faculty of Psychology, Vienna, Austria

It is widely accepted that job demands affect not only one's own but also one's partner's well-being. Several studies to date examined the crossover process (including indirect mechanisms, such as social undermining) linking experiences from one partner to the other.

Recently, the spillover-crossover model theorized that job demands might affect an employees' behavior at home (spillover) which transfers to the other partner and in turn affects his well-being (crossover).

In the present study, we focused on (work-related) social support seeking (SSS) as a potential crossover mechanism. By building on different lines of research on coping, social support and communication in dyads, we proposed a model linking job demands (i.e., work overload, negative social climate) of one partner to his or hers SSS at home via (self-rated, partner-rated) work-to-family conflict (WFC). SSS at home was predicted to diminish partner's mental detachment and subsequently increase his exhaustion.

In order to test the model, a sample of 102 dual-earner couples from Slovenia was utilized. The majority of the participants worked full-time (97%) and was employed as professionals and service and sales workers. Our model was tested using structural equation modeling. Bootstrapping was applied to test the mediating effects.

First, we found that job demands were positively related to WFC and WFC was, in turn, positively related to social support seeking at home. As assumed, SSS at home was negatively related to partner's mental detachment which was, consequently, negatively related to his job exhaustion. The overall indirect effects of job demands on SSS via WFC and of SSS on job exhaustion via mental detachment were significant as well. In contrast to the assumptions, the model was invariant across gender. Common method bias also did not seriously inflate our data because the same relations were established using partner's ratings of WFC. In sum, our results provide insight into another possible crossover mechanism – (work-related) SSS at home. This mechanism might help one of the partners but diminish the recovery opportunities of the other. As our results are cross-sectional and are based on a rather new concept and operationalization of SSS, future research should continue to examine the role of support seeking for the well-being of both partners.

The moderating effects of personality on the stress-burnout relationship: A study among nurses in Malaysia

Hazel Melanie Ramos, Ronald Teoh Li Tiah

University of Nottingham Malaysia Campus, Semenyih, Selangor, Malaysia

The detrimental effects of stress in nursing is a major concern to the profession, healthcare providers and service users (Friese, 2005; Toh et al., 2012), given that the negative outcomes of stress include illness, job dissatisfaction, and increased turnover. Major nursing stressors include workload, interpersonal relationships, and bureaucratic constraints (Bailey, 1985). Sometimes considered to be a thankless profession, many of the tasks nurses do are routinary and unrewarding (McGrath, Reid & Boore, 2003). High attrition rates among nurses have been cited as a major contributory factor in the current global shortage of nurses (Buchan & Calman 2004).

Stress is generally accepted as relational in nature involving some sort of transaction between the individual and the environment (Dewe, 1991), incorporating stressors, strain and individual differences. Numerous studies have linked occupational stress to physical and psychological illnesses, such as musculoskeletal and cardiovascular disorders, anxiety and depression (Grimshaw, 1999). Prolonged stress can lead to burnout (Xie, et al. 2005). Previous research has shown that nurses respond differently to stress depending on their individual personalities (Burgess et al., 2010). Although a large number of studies have been conducted in Western cultures on work-related stress and personality among nurses, relatively few have been done in Asia, where majority of migrant nurses come from.

The aim of the study is twofold. First it aimed to identify key stressors in the nursing practice. Second, it investigated the effects of the big five personality factors on specific stressors to identify which trait would moderate the stressor-burnout relationship and in which direction.

Data was collected from 195 nurses from two general hospitals in Malaysia using the Expanded Nursing Stress Scale, the International Personality Item Pool and the Copenhagen Burnout Inventory. Personality, specifically emotional stability and extraversion, significantly moderated the stressor-burnout relationship for all three dimensions of burnout. The moderating effects of personality differed for different nursing stressors-some alleviated the effects of stressors while others exacerbated them. Factor analysis identified several overarching themes among different nursing stressors. Overall, stressors predicted burnout in all three burnout domains.

Areas for development and support for nurses will be presented further in detail. Implications of the study suggest the need to consider dispositional variables in developing support for nurses. Although past researchers have suggested organizational practices that could help prevent burnout among nurses (Zellars, et al., 2006) it is also important to consider how individual differences can affect the effectiveness of such interventions.

Love won't tear us apart, but work will: How job stressors relate to constructive and destructive reactions to one's romantic partner's negative behavior

Dana Unger¹, Sabine Sonntag¹, Cornelia Niessen², Angela Neff³

¹University of Mannheim, Mannheim, Germany, ²Friedrich-Alexander University of Erlangen-Nürnberg, Erlangen, Germany, ³Ludwig Maximilian University of Munich, Munich, Germany

This study investigates the associations between job stressors and accommodation (i.e., constructive and non-destructive reactions to negative partner behavior) in romantic relationships. We propose that situational constraints and workload negatively relate to self-regulatory resources which in turn are positively associated with constructive reactions and negatively with destructive reactions.

To test our hypotheses, we surveyed 231 respondents with online questionnaires twice on one working day. In general, results showed that job stressors were negatively associated with self-regulatory resources that in turn were associated with accommodation. In particular, situational constraints, but not workload, negatively related to self-regulatory resources. Self-regulatory resources were negatively associated with destructive reactions, but unrelated to constructive reactions. Further analyses yielded equivocal support for the hypothesis that self-regulatory resources mediate the indirect effect of job stressors on destructive reactions. We discuss the importance of reconciling research on the work-life interface and self-regulation.

Does career development predict personal goals at work? A six-year, four-wave study among young Finnish managers

Katriina Hyvönen, Eija Räikkönen, Taru Feldt, Saija Mauno

University of Jyväskylä, Jyväskylä, Finland

The present research addresses the impact of career development patterns on the contents of personal work goals among young Finnish managers. Career development patterns were formed on the basis of rewards (Effort-Reward Imbalance Model; Siegrist et al., 2004) and career events (career disruptions and promotions). That is, with a longitudinal data including four measurements (years 2006, 2008, 2010, and 2012), the effects of recent labourmarket changes on managers' careers could be observed. Personal work goals were measured in the last study phase in 2012 and were classified on the basis of contents into goal categories of competence, progression, well-being, job change, job security, organization, and financial goals (Hyvönen et al., 2009).

The data includes young managers ($n = 316$) who were all 36 years old or younger at the study baseline in 2006. The career patterns were examined using latent class analysis (LCA). After deciding the best LCA solution, ordered logistic regression analyses were conducted to examine whether membership in the latent classes relate to the types of personal goals participants had in 2012. A three-class solution was identified as the best model. Participants in *Class 1* (67.7%) typically had high, increasing levels of rewards and no or few career disruptions and they were also more likely to have promotions. Participants in *Class 2* (27.5%) had typically medium levels of rewards and they were more likely to have experienced career disruptions. Participants in *Class 3* (4.8%) typically had low, decreasing levels of rewards throughout the study period. They had no promotions and almost half of the group had experienced career disruptions. Participants in the *Class 1* reported more goals related to competence than participants in *Classes 2* and *3*. Participants in *Class 3* reported more progression goals than participants in *Class 1* as well as more job change goals than participants in *Classes 1* and *2*.

In conclusion, young managers with favourable career development had more personal work goals related to competence. In turn, young managers with less favourable career development over the follow-up time were more likely to focus on progression and express intentions to change their job. This research contributes to understanding the long-term consequences of psychosocial stressors in the work environment and career events on employees' striving at work.

Quality of working life - The case for a segmented approach to intervention?

Andrew Weyman¹, Katherine Blackford¹, Elizabeth Hellier²

¹University of Bath, Bath, UK, ²University of Plymouth, Plymouth, UK

Quality of employee working life (QoWL) has been, and remains, a widely debated topic amongst employers, employees and public policy makers, yet there remains notable opaqueness in identifying key components, their relative salience, and how profiles might vary across different segments of the working population.

Building on foundation work exploring employee perspectives, this study used the method of paired comparisons to explore employee ($N = 215$) rankings of the relative salience of: relationship with their manager; personal development and training; flexible working arrangements; intrinsic job satisfaction; work-life balance; pay and benefits; social support; and equity and fair treatment.

An exploration of demographic differences revealed variations in both the relative salience of QoWL components and the relative global value placed of QoWL between different segments of the working population, notably: older employees place a higher value on QoWL than younger employees; employees in lower skilled jobs place higher value than those at more senior levels; and public sector employees ascribed more value than private sector employees, and men marginally more than women. The implications of the findings for employers and public policy will be discussed.

Understanding culture: Assessing firefighter safety climate

Jennifer Taylor

Drexel University School of Public Health, Philadelphia, PA, USA

Research and accident investigators have devoted a substantial amount of time to combating firefighter injuries and fatalities, yet these events persist in the fire and rescue service. It is a fair question then to ask, "Why are firefighters not safer?" This question can be answered by researching how human behavior and culture impact safety outcomes in the fire and rescue service. Taking a snapshot of firefighters' work environment through interviews and surveys, allows researchers to develop a better understanding of the safety climate factors that impact

safety outcomes. The research performed by the safety climate project will advance injury prevention efforts by providing a validated safety climate survey tool that will be available for free to all U.S. fire departments.

The Safety Climate Project has successfully completed its qualitative data collection and analysis. This phase of the research consisted of interviews and focus groups with ten fire departments, both career and volunteer, from across the country. The interviews and focus groups were conducted with fire service personnel of various ranks to ensure that a full picture of safety climate was captured. The information gathered was analyzed using qualitative methods to develop survey items which accurately measure the unique safety climate of each fire department. Psychometric validation of the survey instrument is currently underway.

The session presenters will use both lecture and interactive discussion to describe the data collection, survey development, and results from the qualitative phase of this project. The emerging factors of the survey will be detailed.

Effectiveness of a comprehensive stress management program to reduce work-related stress in medium sized enterprises

Chunhui Suh¹, Shin-Ae Kim¹, Mi-Hee Park¹, Kunhyung Kim¹, Chae Kwan Lee¹, Byung Chul Son¹, Jeong Ho Kim¹, Jong Tae Lee¹, Kuck-Hyun Woo², Kabsoon Kang¹, Hyunjin Jung³

¹*Department of Occupational and Environmental Medicine & Institute of Environmental and Occupational Medicine, Pusan Paik Hospital, Inje University, Busan, Republic of Korea,*
²*Department of Occupational and Environmental Medicine, Soonchunhyang University Gumi Hospital, Gumi, Republic of Korea,*
³*Education & Future Center, Hyunjin Materials. Co., Ltd, Busan, Republic of Korea*

Objectives: To assess the effectiveness of a comprehensive workplace stress management program consisting of participatory action-oriented training (PAOT) and individual management.

Methods: A comprehensive workplace stress management program to reduce job related stress was conducted in a medium sized metal forging enterprise in which annual revenue and the number of employees has increased rapidly, followed by undergone organizational restructuring. The study subjects were 123 white collar workers of 13 teams and 129 blue collar workers of 11 teams which comprised 85% of total workers. The pre- stress survey was conducted in September 2011, measuring Korean Occupational Stress Scale(KOSS) and Worker's Stress Response Inventory(WSRI). After implementing both organizational and individual level intervention, the post- stress survey was conducted in November 2011.

Results: In the pre-stress survey, the subscales of physical environment, insufficient job control and interpersonal conflict were worse than Korean worker's average. Most of the workers participated in organizational level PAOT and made team based improvement plans. Based on the basic survey, 24 workers were interviewed by a researcher. After organizational and individual level interventions, there was a reduction of several adverse psychosocial factors and stress responses. In blue-collar workers, psychosocial factors such as physical environment, job demand, organizational system, lack of rewards and occupational climate were significantly decreased, as well as occupational climate in white-collar workers.

Conclusions: In light of these results, comprehensive stress management program was effective in reducing job related stress in a short term period. We believe a persistent long term follow-up is necessary to investigate whether observed effects are maintained over time. Both team based improvement activities and individual interviews have to be sustainable and complementary to each other under the long term plan.

Developmental trajectories of multi-site pain and depression – The effects of job demands, job resources and individual factors

Auli Airila^{2,1}, Jari Hakanen¹, Ritva Luukkonen¹, Sirpa Lusa¹, Anne Punakallio¹, Päivi Leino-Arjas¹

¹*Finnish Institute of Occupational Health, Helsinki, Finland*, ²*University of Helsinki, Finland*

Introduction: Using a person-centered approach and the JD-R model, the aim of our study was to investigate (1) whether there are different developmental paths in multi-site musculoskeletal pain and depressive symptoms; and (2) whether job demands, job resources, personal resources and life style at baseline predict belonging to a particular pain-depression trajectory group during a 13-year follow-up period.

Methods: The data consisting of a representative sample of Finnish firefighters (N=360) were collected by questionnaires in 1996, 1999, and 2009. The MSP during the preceding 12 months was measured using seven items adapted from the Nordic Musculoskeletal Questionnaire. Depression was assessed by the Profile of Mood States questionnaire. The effects of job demands (i.e., work load and difficult work postures), job resources (i.e., supervisory relations, interpersonal relations, and task resources), personal resources (i.e., hope for the future), life style (i.e., smoking, physical exercise, alcohol consumption, and sleeping problems) on pain and depression were assessed. We applied latent class growth modeling to identify pain-depression trajectories, and multinomial logistic regression models in order to investigate the relationship between the latent classes and the possible antecedents.

Results: Three distinct pain-depression trajectories were identified: (a) Low Symptoms ($n = 179$), (b) High Pain ($n = 115$), and (c) High Depression ($n = 66$). With the Low Symptoms as reference, lack of all job resources and personal resources, and high levels of work load and sleeping problems predicted belonging to High Depression trajectory. Similarly, work load, lack of co-worker support and personal resources, and sleeping problems were related to belonging to High Pain trajectory.

Conclusions: This study showed that different developmental paths in pain and depression are possible. Our study showed that a combination of both low job demands and good sleep, and high job resources, and personal resources are protective for the development of pain and depression. Developing work conditions by decreasing demands and increasing resources it is possible to prevent depression and reduce pain symptoms among employees.

Counterproductive work behaviours in the context of the Demand-Control-Support model: The indirect effects of job demands are mediated by job burnout and moderated by job control and social support

Lukasz Baka¹, Ewelina Smoktunowicz², Roman Cieslak^{2,3}

¹*Jan Dlugosz University, Czestochowa, Poland*, ²*University of Social Sciences and Humanities, Warsaw, Poland*, ³*University of Colorado, Colorado Springs, USA*

Introduction: There is an ongoing discussion about what factors lead to a higher frequency of counterproductive work behaviors (CWB). Some contemporary models assume that CWB result from various job demands. More recent studies aim to identify mediators and moderators of links between job demands and CWB. The present study is an attempt to apply the assumptions of the Demand-Control-Support (DCS) model to the CWB area. DCS model has not been verified widely enough in the context of organizational behaviours.

Objectives: The aim of the study was to verify if variables identified in the DCS model and job burnout may explain CWB. Specifically, the study investigated (1) mediated by job burnout effects of job demands on CWB; (2) the moderated by social support and job control direct and indirect (via job burnout) effects of job demands on CWB. It was hypothesized that the relationship between job demands and CWB would be mediated by job burnout and if this mediation would be moderated by job control and social support.

Methods: Data was collected among 625 police officers (20% women). The exemplification of job demands was workload which was measured with the Quantitative Workload Inventory. The Oldenburg Burnout Inventory was used to assess symptoms of job burnout, the Factual Autonomy Scale was applied to evaluate job control and the Psychosocial Working Conditions Questionnaire was used to measure social support. CWB were measured with the Counterproductive Work Behavior-Checklist. The hypothesis was tested by means of regression analysis with bootstrapping, using the PROCESS macros.

Results: Moderated mediation analysis showed that high job demands were indirectly related to high CWB, with job burnout acting as the mediator. These indirect effects were moderated by work-related resources (i.e., job control and social support). Specifically, job demands were associated with higher burnout when social support was low. High burnout, in turn, was related to more frequent CWB, in particular when support was low and job control was high. The same combination of resources (low social support and high job control) was the condition for the association between job demands and CWB.

Discussion: The findings have implications for further applications of the DCS model. Job burnout (constituting an individual outcome of demands, control, and support at work) may be considered as the mediator in this model; work-related resources (job control and social support) may be considered as the moderators of the relationship between job burnout and CWB.

Hell is other people: How gender and type of interactions with strangers influence a person's risk for depression in different occupations

Sebastian Fischer¹, Anita Wiemer¹, [Laura Diedrich](#)¹, Wulf Rössler^{2,1}

¹Leuphana University Lueneburg, Germany, ²University of Zurich, Zurich, Switzerland

'Hell is other people' – this classic from Sartre's play 'No Exit' (1962) alludes to the discomfort that most people feel at times when they are around strangers and cannot leave the situation. In reference to Sartre's statement, we suggest that the emotional tone of interactions with strangers, that are a part of work in many occupations, influences the risk for depressive disorders. The risk for depressive disorders has been found to vary between occupations. Occupations also differ in the way they require employees to interact with strangers to the organization, and in the likelihood that conflict is a normal part in these interactions. Characteristics of occupations thereby may function as environmental emotional stressors, in line with diathesis stress models of depression. Literature suggests that females are more able to handle emotional stressors in a functional way than males. However, if conflict in interactions is high, so-called strong situation constraints apply to individual handling of emotional stressors and make functional strategies impossible. Therefore, in this paper, we investigate the joint influence of gender and the type of occupational interactions with strangers at work in an occupation on individuals' depression diagnoses.

We use a large dataset (N = 76,563 individuals nested in K = 194 occupations) from the German pension insurance, along with the O*Net dataset on occupational characteristics. In a multilevel framework, we find distinct influences of the occupational environment on the risk of depression of employees: In line with Sartre's notion that 'hell is other people', frequent conflict with strangers relates to higher likelihood for depression within both males and females. However, frequent interactions with the public in an occupation (without conflict) relate to higher likelihood for depression within males, but lower likelihood for depression within females. We theorize that those occupations which involve frequent negative interactions make functional coping impossible and increase depression for both women and men. Contrary, occupations which involve frequent neutral interactions leave room for functional coping strategies. Functional coping strategies, however, are more often found in women than in men. Thus, gender and type of interaction (conflict/no conflict) influence the risk for depression in differential ways.

Cyberbullying in work life

Rebecka Forssell, Tuija Muhonen
Malmö University, Malmö, Sweden

Due to the increased use of digital communication such as e-mail, text messages, Facebook, Twitter and Instagram, a new form of bullying called cyberbullying has emerged. Unlike traditional workplace bullying, cyberbullying in work life is to a large extent an unexplored phenomenon. Research on adolescents' exposure to cyberbullying shows that cyberbullying diverges from traditional bullying. Cyberbullying is not limited to a certain place or time. The geographic distance also makes the responses, facial or bodily, of the negative acts invisible for the perpetrator, which reduces feelings of empathy for the victim.

The objectives of the current study are to investigate to what extent cyberbullying is prevalent in work life, how it is expressed, what the consequences are for the individual and the organization, and in what way cyberbullying diverges from traditional workplace bullying.

An explorative pilot study was conducted during autumn 2013 by means of a public web questionnaire that was distributed through the project's Facebook page and other networks. The following background questions were included in the survey: gender, occupation and position (manager or non-manager). So far 104 participants, 38 men, 65 women and 1 with transgender identity, have responded to the questionnaire. The majority of the respondents are working as teachers, administrators or with human resource issues. Around 5 per cent of the participants have experienced harassing acts through digital media from their colleagues and supervisors, whereas 11 per cent have experienced this from the clients. 24 per cent state they have witnessed somebody else being victimized. The most common media for harassing acts is Facebook followed by e-mail and blog. The harassing acts consist of spreading rumours, threatening statements, being excluded from sending lists or as a friend on Facebook, not responding to e-mails and being ridiculed.

We have also conducted a focus group interview with ten inspectors at the Swedish Work Environment Authority. The inspectors described harassing behaviours online such as social media being used as a channel to put pressure on authorities so that they would make favourable decisions for the clients. Employer's positive attitude for staff members to engage in social media was highlighted in the interview as well as organizations' lack of knowledge in how to tackle online abuse. More detailed results of the pilot study will be presented at the conference. The pilot study forms a basis for an extensive questionnaire study about cyberbullying, which will be conducted in 2014.

High-performance work systems, job strain and job engagement: What is the role of work-home interference?

Audrey Babic¹, Florence Stinglhamber², Isabelle Hansez¹

¹*University of Liège, Liège, Belgium*, ²*Université catholique de Louvain, Louvain-la-Neuve, Belgium*

High-performance work systems, i.e. a key concept of modern management, refer to a group of human resource practices that are designed to increase employees' competencies and motivation, and consequently to engender employee and organizational performance (Appelbaum, Bailey, Berg, & Kalleberg, 2000). The potential effects of high-performance work systems on employee well-being have rarely been studied.

Filling this gap, the objective of the present study was to examine the impact of high-performance work systems on two well-being outcomes, i.e. job strain and job engagement. Furthermore, we investigated the mechanisms underlying these relationships. Precisely, we hypothesized that negative and positive work-home interference mediate the effects of high-performance work systems respectively on job strain and job engagement.

One hundred and seventy employees of a Belgian firm were surveyed. Data was analysed using structural equation modelling and bootstrapping. Results show that positive work-home interference partially mediates the relationship between high-performance work systems and job engagement, while negative work-home interference partially mediates the relationship between high-performance work systems and job strain.

Our findings indicate that high-performance work systems strongly influence employees' perceptions concerning work-home interference which, in turn, impacts their well-being. Having practices aimed at motivating employees in such a way that their performance increases helps them to better manage the often competing demands of work and family, with positive consequences in terms of work well-being.

Discrepancy in flexibility and employment security expectations: Impact on well-being at work

Fabrice Travagianti, Audrey Babic, Isabelle Hansez
University of Liège, Liège, Belgium

The current study proposes for the first time to analyse how the discrepancy between actual and ideal job situations, especially in terms of flexibility and employment security, impacts well-being. Precisely, we hypothesized that stress mediates the effects of (1) Perceived Discrepancy in Flexibility Expectations (PDFE) and (2) Perceived Discrepancy in Security Expectations (PDSE) on job satisfaction (JSat) and intention to quit (IQ). According to Kämpfe and Mitte (2009), neither the individual's current states, nor goals are sufficient to predict well-being; it is more a question of the discrepancies between them. Moreover, perceiving discrepancy between current and ideal work activities increases stress (Lloys, McKenna & King, 2004) which is found to reduce JSat and increase IQ (Ming-Chen, Shu, 2009 ; Mark & Smith, 2012).

To measure the discrepancy between actual and ideal job situations, we created a questionnaire based on 60 interviews with Belgian workers. According to empirical indicators of flexibility and employment security dimensions, these interviews highlighted twelve categories of individuals' expectations. Each category was represented by 5 items; for each item, workers were asked to evaluate their current state (7-point likert scale) and their ideal state (from -3 "wish much less" to 3 "wish much more" and 0 "ok with my current state"). This questionnaire was sent online to PhD students of a Belgian University. We received 250 usable returns. Exploratory factor analysis shows good consistency for the newly created questionnaire. Structural Equation Modelling (Mplus -Muthén & Muthén, 1998-2013) was used.

Results show that PDFE and PDSE impact stress which, in turn, significantly increases IQ and decreases JSat. We have also found that PDFE has a positive direct impact on IQ and that PDSE has a negative direct impact on JSat. Indirect effects were tested with bootstrap and were all significant. We could then conclude that stress partially mediates the relationship between (1) PDFE-IQ and (2) PDSE-JSat and totally mediates the relationship between (3) PDFE-JSat and (4) PDSE-IQ.

In terms of practical implications, additional analysis helps us to understand which flexibility and security practices impact well-being at work. The present study is not without limitations. The first is the use of a content but non-statistically validated questionnaire to measure PDFE and PDSE and the second is the sample specificity (PhD students) and size (N= 250).

Cancer survivorship and sustainable working life

Thomas Cox¹, Sara MacLennan², Sarah Scott²
¹*Birkbeck University of London, London, UK*, ²*University of Aberdeen, Aberdeen, UK*

Together, the cancers pose one of the major health-related threats to the quality of life and the longevity of working people and also provide a lens through which the healthiness of their employing organisations might be viewed. Over the past 20 or so years, advances both in the

early diagnosis and in the treatment of cancers have meant that surviving the disease is a real possibility for some. In turn, many working people wish to return to work after treatment while some manage to work through that process. As a result, there is an increasing interest in Europe in how we can best manage the impact of cancer diagnosis and treatment, and aftercare, on working life.

This paper briefly reviews the current state of knowledge within the framework of the authors' Adaptation – Accommodation Paradigm (Cox et al., 2014) and, in doing so, identifies some of the key issues which remain to be resolved (see, for example, Wells et al., 2014). The paper also outlines the current Programme of Work of the UK-based METIS Collaboration and describes how some of its research lines address these issues.

Perceived stress and post traumatic reaction of workers after bank robbery

Marija Molan

University Medical Centre Ljubljana, Ljubljana, Slovenia

Issues: Economic crisis and higher value of money have caused higher frequency of bank robberies. There were only isolated bank robberies in the times of the Slovenian Tolar. The number of bank robberies has increased and in 2013 (from January to September) there were 9 bank robberies in only one Slovenian region.

The goal: Psychological support to victims of bank robberies (bank workers) and creation of preventive measures to increase their safety and management of post traumatic reaction.

Method:

- Use of psychological questionnaire, intervention and support after the robbery and follow up with estimation of the efficiency of suggested interventions (debriefing, relaxation methods, psychological interventions and medication support) to the time of victim reports of stable normal well being.
- Creation of recommendations to achieve adequate level of safety culture.
- Sample: 19 front desk bank workers from three different banks (17 female, 2 male).

Results: Perceived level of stress and anxiety immediately after the robbery: immediately after the robbery perceived level of unavailability, stress and depressed mood $M = 3,23$ (on the scale from 1 to 5); perceived level of anxiety $M = 43,71$ (4 on the scale from 1 to 5). Mean time: introduction of debriefing, individual support, relaxation and management of emotional reaction and medication for 7 workers. Phase of normalization: the shortest period - one month; the longest period – 14 months. Perceived level of availability at the end of psychosocial support $M = 1,31$ (scale from 1 to 5) (high level of availability, without perception of stress). Perceived level of anxiety $M = 30,11$ (2 on the scale from 1 to 5); (no perceived anxiety).

Conclusion

- Increase of bank robberies frequency demands need for psychological intervention and support to workers.
- Efficiency of support depends also on the level of intervener's acceptance by workers, his/her level of empathy, professional skills and possibilities for interventions in creation of higher level of safety.
- Psychological intervention must be supported with other preventive measures.
- Emphatical support of management is crucial.
- Introduction of additional physical barriers is recommended.
- It is crucial to introduce new behavioural patterns as part of safety culture.
- It is obligatory to create safety culture adapted to the new situation.

Effective management of posttraumatic stress reaction after bank robbery has to include a combination of proposed measures. Due to the increase of robbery frequency, effective management is a crucial part of creation and preservation of safety culture.

The role of personality and trait emotional intelligence on performance and facet-specific job satisfaction among sales personnel in the Malaysian banking industry

Angeli Santos, Ren Chang Soo

University of Nottingham Malaysia Campus, Selangor, Malaysia

The present study examines the relationship between personality, trait emotional intelligence (EI) on specific facets of job satisfaction and performance at work among sales personnel in the Malaysian banking industry. Trait-based EI is defined as "a constellation of emotional self-perceptions located at the lower levels of personality" (Petrides et al., 2007). The conceptualization of EI as a lower-order personality construct suggests that it is expected to show strong correlations with the higher-order dimensions that define its factor space (Petrides, 2001). To date, a considerable amount of research has demonstrated a link between trait-based emotional intelligence measures and health outcomes, and personality with health and productivity outcomes, but only limited research has examined whether trait-based measures of EI significantly overlap with personality (Brackett & Mayer, 2003; Saklofske et al., 2003) in predicting work attitudes and actual performance at work. The present study explores this possibility.

It is hypothesised that trait EI will show an incremental validity over and above personality on sales performance over a six month period and specific facets of job satisfaction, namely, intrinsic and extrinsic job satisfaction, and job-itself, working conditions and employee relations satisfaction. A total of 131 sales personnel from a large multinational banking corporation were sampled. Performance is operationalized by an average percentage of sales target achieved over a six month period.

Results from a series of hierarchical multiple regressions showed that both personality and EI significantly predicted performance at work, accounting for 10.5% and 2.5% of the variance, respectively. Personality and EI also significantly predicted intrinsic and extrinsic satisfaction, job-itself, working conditions and employee relations satisfaction. Personality accounted for between 7-16% of the unique variance of facet specific job satisfaction, while EI accounted for between 7-14% of the unique variance of facet specific job satisfaction. Agreeableness, however, was the only personality trait to significantly predict job satisfaction. Results are discussed in line with previous findings and directions for future research and practice are proposed.

Duty fitness in bus drivers: Presentation and testing of a new model

Ross Owen Phillips, Torkel Bjørnskau

Institute of Transport Economics, Oslo, Norway

Work-related health problems are more common for bus drivers than for many other occupations, and the stressors responsible may be on the increase. Although health decrements could well be linked to poorer safety performance in bus driving, little has been done to characterise the relationship between work-related health status and safety behaviour. A model is therefore presented as an evidence-based framework for future research, describing that work stressors are linked to safety behaviour via a dynamically interacting triad of "duty fitness" factors: psychophysiological stress response, sleep quantity/quality and health status.

This so-called Duty Fitness Model was subject to preliminary testing by analyzing *post hoc*, responses from a survey on stress, health status and safety behaviour from 1183 bus driver members of a large transport union in Norway. In this sample, one in three drivers reported a

work-related health problem, of which 81 per cent were musculoskeletal in nature, with or without associated stress problems.

Analysis of responses from shift workers in this sample gave the following findings in support of the Duty Fitness Model: (i) work-related time pressure and work-home balance were each responsible for a significant and substantial variation in the amount of shift-related sleep problems and work-related health problems; (ii) work-related health problems were linked to shift-related sleep problems; (iii) the effects of time pressure at work and work-home balance on work-related health were partially mediated by shift-related sleep problems; and (iv) for those reporting time pressure from route timetables, the level of work-home conflict was responsible for a significant variation in reports of speeding due to time pressure, and breaking driving time regulations due to time pressure.

Importantly, regression analysis showed that work-related health problems explained a small but significant change in the total variance of driving hours transgressions explained. Future research is recommended to perform a more robust test of the model, and to act as a basis for potential longitudinal studies.

What is fatigue? A call for consensus based on learning from past definitions

Ross Owen Phillips

Institute of Transport Economics, Oslo, Norway

For several decades researchers in occupational health have attempted to define fatigue, yet there is still no clear consensus about what it is or how it should be defined. Occupational health practitioners need guidance now more than ever, as more and more organizations are asked to assess and control the risks related to fatigue.

A literature review, carried out as part of a project looking in fatigue in human operators working in the Norwegian transport sector, shows that research to date has resulted in definitions that can be classified as psychological, physiological or performance-based. The argument is made that most of definitions address different aspects of the same concept.

Moreover recent progress made in distinguishing fatigue from sleepiness and stress suggests a way in which existing definitions can form the basis for consensus. In a consensus definition, fatigue is a process with cognitive, emotional and physiological aspects having consequences for effort, job performance and sleepiness. The new definition will be presented. The implications of such a definition for practitioners are illustrated by describing how it will guide the measurement of fatigue in our research project.

Illegitimate tasks and sleep quality: An ambulatory study

Diana Pereira, Norbert K. Semmer, Achim Elfering

University Bern, Bern, Switzerland

Recovery, as a process of psychophysiological unwinding after effort expenditure, is considered a vital link in the relationship between acute reactions to stressful work characteristics and employee health in the long run (Geurts & Sonnentag, 2006). Under optimal circumstances, recovery starts after work and is completed by the following morning. However, work stressors that may represent threats to the self may lead to persistent psychophysiological load reactions; as a consequence, recovery opportunities are insufficient, and/or the individual may not be able to recover. Such processes are likely to lead to increased intensity of load reactions, higher need for recovery, and potentially to an accumulative process resulting in more permanent symptoms such as chronically impaired sleep and psychosomatic complaints (e.g. Sluiter, et al., 2001). By violating role expectations and identity, illegitimate tasks are considered to represent a threat to the self and to be a rather upsetting and frustrating stressor (Semmer et al., 2007).

Based on the arguments that illegitimate stressors represent a threat to the self, we postulate that daily illegitimate tasks are related to impaired physiologically assessed sleep quality. Our hypotheses were tested within a psychophysiological diary study. The final sample consisted of 76 employees of several Swiss organizations that participated in a two-week data collection. Participants held a variety of jobs, but were all employed in service jobs, e.g. cashiers at supermarkets and call-centre agents. Data was collected with diary booklets and sleep actigraph (Sensewear armband).

Supporting our hypotheses, multilevel regression analysis showed that illegitimate tasks were negatively related to sleep quality. Overall, our results confirm that illegitimate tasks are related to sleep impairments. As predicted, illegitimate tasks were positively related to sleep fragmentation and sleep-onset latency, and negatively related to sleep efficiency, but not to sleep duration even after controlling for time-pressure, social stressors at work and at home, as well as for the effect of the dependent variable from the day before. Thus, our results corroborate that illegitimate tasks are a construct in its own right that explains variance in sleep impairments even after controlling for classical stressors.

Shifting attitudes: The national education programme for General Practitioners in work and health in Great Britain

Sayeed Khan¹, Debbie Cohen²

¹EEF, the manufacturers' organization, London, UK, ²Centre for Psychosocial Research, Occupational and Physician Health, University of Cardiff, Cardiff, UK

Background: Evidence suggests that general practitioners (GPs) find fitness for work certification and work-related consultations challenging citing patient advocacy, doctor-patient relationships and lack of training as key issues. The clinical co-leads of this project piloted, developed and rolled out a National Education Programme (NEP) that started in 2009.

Aims: To develop and evaluate a face-to-face educational programme that shifts GPs' attitudes to the management of the consultation about work and health.

Methods: A 3-hour interactive programme that addressed both knowledge and skills for the management of the health and work consultation using behaviour-change / motivational interviewing principles was developed. Evaluation focused on delegates' confidence in managing the work and health consultation and the importance (priority) they gave to the subject. Questionnaires at three time points were constructed: pre, immediately post and 3 months post training.

Results: 152 workshops were evaluated across the UK between July 2009 and March 2011. A total of 2865 GPs attended the workshops. Questionnaire response rates were 78% pre workshop, 80% post workshop and 14% three months post workshop. Evaluation showed a significant increase in GPs' confidence in managing the consultation regarding work and health post workshop and at 3 months compared to the pre workshop confidence; GPs also gave higher priority to these types of consultations after the training.

Conclusions: The NEP has brought the training about health and work to prominence in general practice, and has also influenced policy and practice in other medical specialties. This approach may be suitable for training in other occupational health related professionals.

CareerSKILLS: Effectiveness of a career development intervention for young employees

Jos Akkermans^{1,3}, Veerle Brenninkmeijer¹, Roland Blonk^{1,2}, Wilmar Schaufeli¹

¹Utrecht University, Utrecht, The Netherlands, ²TNO Quality of Life, Hoofddorp, The Netherlands, ³VU University, Amsterdam, The Netherlands

Purpose: The aim of our study was to investigate the effectiveness of the CareerSKILLS program, a career development intervention for young employees that is based on career competency research and on the JOBS Program (Caplan, Vinokur, Price, & Van Ryn, 1989).

Design/Methodology: In a quasi-randomized control trial, the effects of the program were tested in a homogeneous sample of young employees with intermediate vocational education (N intervention=112, N non-intervention=61) and a heterogeneous sample of employees who participated in an employment program (N intervention=71, N non-intervention=41). Participants were followed during a period of 6 weeks.

Results: Our results support the short-term effectiveness of the intervention: participants of the CareerSKILLS program, versus a control group, showed increases in career competencies (ie., reflection on motivation, reflection on qualities, networking, self-profiling, work exploration and career control), self-efficacy, resilience against setbacks, career-related behaviors, and perceived employability. These results provide initial empirical support for the effectiveness of the CareerSKILLS intervention.

Limitations: We would recommend future research to examine long-term effects and include objective measures as well.

Research/Practical Implications: This study provides insight into effective ways of stimulating career self-management of (young) employees. The intervention may be a valuable addition to career guidance programs in organizations and can be used as an organizational socialization tactic for newcomers.

Originality/Value: While employability research often concerns older employees, this study focuses on younger employees. Young employees encounter many career-related decisions that may have important consequences for their future career, health and well-being.

Depression and cardiorespiratory Fitness: A meta-analysis

Theodoros Papasavvas^{1,2}, Mohammad Al-Hashemi², Dominic Micklewright¹

¹University of Essex, Colchester, Essex, UK, ²Heart Hospital, Hamad Medical Corporation, Doha, Qatar

Background: Cardiorespiratory fitness (CRF) is increased by exercise, which has also been reported to improve depression.

Objectives: To assess the relationship between depression and CRF in healthy and depressed adults (aged 18 and over).

Search methods: The PubMed, Cochrane Library, Google Scholar and ProQuest databases were browsed for English-language studies published from January 2000 to September 2012.

Selection criteria: Studies reporting correlation between a depression scale and VO₂peak, as well as studies from the data of which such a correlation could be calculated were included. Studies on pregnant or postnatal women, obese participants and smoking abstinence were excluded.

Data analysis: Correlation coefficients (CCs) were converted to Fischer's z and the analysis was performed using a random-effects model. Then, summary effects and 95% confidence intervals (CI) were converted back to CCs.

Main results: Thirteen studies (3931 participants) were included. A modest correlation between depression and CRF was found (CC -0.17, 95% CI -0.22 to -0.11), appearing stronger in male (CC -0.22, 95% CI -0.26 to -0.18) than female (CC -0.12, 95% CI -0.19 to -0.05) participants ($p = 0.015$). There was no difference in the summary effect between healthy and depressed adults ($p = 0.23$). Age and publication year were not related to studies' effects ($p = 0.12$ and $p = 0.07$, respectively). Three of the 13 included studies used Respiratory Exchange Ratio ≥ 1.1 as an objective termination criterion of the cardiopulmonary exercise stress test.

Conclusions: Depressed adults, especially men, tend to be unfit and vice-versa. This finding may be of importance in professions involving strenuous activities. It also encourages the conduction of research on the effects of improving CRF on depression and vice-versa, while also indicates that there may be a biological link between depression and CRF, although this needs to be confirmed in studies controlling potential moderators.

Better safe than sorry? The benefits of job security in relation to regulatory focus and age

Veerle Brenninkmeijer, Anique van Lent
Utrecht University, Utrecht, The Netherlands

Purpose: The aim of this study was to evaluate the associations between job security, affective wellbeing and work engagement, in relation to individuals' regulatory focus and age.

Design/Methodology: These relationships were explored in a sample of 125 employees working in an international architecture and design firm.

Results: The effects of job security were more complex than expected and deviated in some instances from our hypotheses. Job security appeared to be beneficial only for older employees with a high promotion (or low prevention) focus. Younger employees with a low promotion (or high prevention) focus responded with 'mixed feelings' to job security, whereas job security reduce the well-being of younger employees with a high promotion (or low prevention) focus and older employees with a low promotion (or high prevention) focus.

Limitations: We would recommend future research to examine long-term effects of job security, including larger samples and a variety of organizations and sectors.

Research/Practical Implications: Our findings point at the complex interplay between age and regulatory focus in relation to the benefits of job security. The outcomes underline the importance of paying attention to individual differences in the response to job security, both in research settings and in managerial strategies.

Originality/Value: This study increases our understanding on the benefits of job security for workers with varying regulatory foci and from different generations.

Longitudinal predictors of sick leave among mothers and fathers – A systematic review

Anni Skipstein, Wendy Nielsen
Norwegian Institute of Public Health, Oslo, Norway

Background: Sickness absence rates are higher for women than for men. This gender difference has often been linked to the high rate of women in the labour-force who have children. A possible reason is that the combination of work participation and taking care of children may lead to role conflict or role overload. This may in turn lead to psychological distress and subsequent sickness absence. Another explanation might be related to psychological distress since women typically report more symptoms than men. However, knowledge about different predictors for sickness absence among parents is scarce, and there is a lack of systematic reviews covering this field.

Aim: To systematically review the knowledge regarding longitudinal predictors of sickness absence among mothers and fathers.

Methods: A systematic literature search was conducted in October 2013, with the electronic databases Medline, PsycINFO, and Embase using medical subject heading terms and key words. The search was not limited to years or language. The two review authors will independently screen the abstracts by titles and abstracts. Full text articles will be retrieved for inclusion/exclusion, and quality assessment of the included studies will be conducted. If possible, a meta-analysis will also be conducted.

Results: After removing the duplicates, the literature search revealed 1517 titles, before the screening. Final findings will be presented at the conference.

Do different dimensions of organizational citizenship behavior have different effects on work-family enrichment and work-family conflict?

Lynn Germeys, Sara De Gieter

Vrije Universiteit Brussel, Elsene, Belgium

Purpose: Past research focused on the positive effects of organizational citizenship behavior (OCB), that is, behavior that goes beyond an employee's job description like helping a colleague (Organ, 1988). Only recently, researchers started to examine potential downsides of OCB (Podsakoff, Whiting, Podsakoff, & Blume, 2009). The few studies examining the effect of OCB on the work-family interface (WFI) — that is, the interference of one's work role with one's family role — reported beneficial as well as detrimental effects (e.g. Bolino & Turnley, 2005; Kwan & Mao, 2011). In this study, we propose a theoretical model stating that the effect of OCB on WFI depends on the type of OCB that is performed. We draw on the recently proposed differentiation between proactive and reactive OCB (Spitzmüller & Van Dyne, 2013): extra-role behavior that is performed voluntarily or to reciprocate to a positive treatment by others (e.g., supervisor, colleagues), respectively. Moreover, we expect reactive OCB to have a different effect on WFI depending on whether the employee feels pressured or not to perform OCB, that is, under high versus low 'citizenship pressure' (Bolino, Turnley, Gilstrap, & Suazo, 2010).

Method: Employees will complete a questionnaire measuring proactive and reactive OCB. Two weeks later these employees will receive a questionnaire rating the degree of citizenship pressure they experience. At the same time their partners will complete a questionnaire evaluating the employee's work-family enrichment and work-family conflict. The data collection is planned for January 2014.

Results: The data will be analyzed using structural equation modeling. We hypothesize that proactive OCB as well as reactive OCB performed under low citizenship pressure will lead to work-family enrichment, whereas reactive OCB performed under high citizenship pressure will lead to work-family conflict.

Conclusions: This research will contribute to a better understanding of the mechanisms underlying the OCB – WFI relationship. This is particularly important given the consequences of WFI for physical and psychological health (Hammer & Zimmerman, 2011). Our findings can raise employers' awareness of the potential consequences of putting pressure on their employees to perform OCB on the employees' work-family interface.

The effect of immediate feedback: Evaluation of an occupational health web-based intervention tool (ISAT – Interactive Self-Assessment Tool)

Liliana Dias¹, Debora Vansteenwegen^{1,2}, Inge Van den Brande², Sofie Tayemans², Yasmin Handaja²

¹*KULEUVEN, Leuven, Belgium*, ²*ISW Limits, Leuven, Belgium*

Given the increasing interest in positive occupational health interventions in the private sector, ISW Limits recently developed and commercialized an innovative web-based tool, denominated ISAT (Interactive Self-Assessment Tool), which provides insight into employee's wellbeing, their perceived stress and motivation. The tool provides advice about coping with mental health problems and stimulates proactive behavior. Our research aims to evaluate a web-based positive occupational health intervention tool, by experimental manipulation of a key design feature, the immediate feedback delivered directly to the respondent.

In a preliminary study a total 148 subjects were randomly divided into an experimental condition (N=72), which received immediate feedback after answering the self-assessment questionnaires, and a control condition (N=76), which only received delayed feedback. One month later the second measurement took place (N_{experimental condition} = 34; N_{control condition} = 30).

The results of the preliminary study show that employees who received immediate feedback were more willing to use the tool in the future, and to discuss the problem with others compared to the control condition. No significant differences were found, in both moments, in proactive attitude, self-efficacy and empowerment aggregated measurements.

A second study was designed and is now at an implementation stage. After the first measurement a follow-up measure after a couple of weeks will be added in order to observe changes with regard to proactivity, self-efficacy and empowerment at the workplace. We intend to present at the conference the results of the second study, measuring the impact of immediate feedback just after completion, but also after a couple of weeks.

On psychosocial resources across domains: The case for paid work and volunteering

Romualdo Ramos¹, Rebecca Brauchli^{1,2}, Georg Bauer^{1,2}, Theo Wehner¹
¹ETH Zürich, Zürich, Switzerland, ²Universität Zürich, Zürich, Switzerland

Many scholars have discussed and shown the salutary effects of volunteering, arguing that the latter may function as a psychosocial resource. Yet only a handful of studies have actually measured the resources assumed to fuel such positive effects in a JD-R manner. Moreover, there has been no attempt in observing resources from paid work and voluntary work simultaneously.

In this study, we have measured social support, job significance, feedback from the job, and autonomy at the workplace for both volunteers (N=292) and non-volunteers (N=482). In addition, we have assessed the same job resources within the context of voluntary work for those engaged in such activities. Positive mental health (i.e. social, emotional and psychological well-being) and work engagement were our outcome variables.

As expected, data has shown correlations between job resources at the workplace and health outcomes, with job significance being the strongest predictor in our sample ($r=.69$). Volunteering status (i.e. yes/no) also showed a main effect for positive mental health ($t(773)=4.15$; $p=.000$) and work-engagement ($t(773)=4.15$; $p=.01$). Yet when testing for interaction effects between volunteering status and resources, we found that those with lower social support at the workplace benefited more from volunteering than those who find that social support at work. In turn, when we observed volunteers only, we found a small yet significant interaction effect between the social supports received from the respective domains: those deprived from such resources at work do not benefit significantly from social support in volunteering, but for those who do find social support at work, volunteering has an additional boosting effect.

By considering the resources from both domains, this study sheds a new light on the debate on compensation and complementation in the work/non-work literature, suggesting that both mechanisms might be in play depending on the groups being considered (i.e. volunteers only vs. volunteers and control group).

The links between the 'Big Five' personality traits and job crafting

Raymond Randall¹, Jonathan Houdmont², Robert Kerr³, Kelly Wilson³, Ken Addley⁴
¹Loughborough University, Leicestershire, UK, ²University of Nottingham, Nottingham, UK,
³University of Ulster, Co. Antrim, UK, ⁴The Northern Ireland Civil Service Occupational Health Service, Belfast, UK

Background: Job crafting refers to the self-initiated changes that employees make to the task or the relational boundaries of their work (Wrzesniewski & Dutton, 2001). The job demands-resources model has been used to link crafting to employee well-being (Nielsen & Abildgaard, 2012). Both work characteristics and worker personality may stimulate specific types of job crafting behaviour but these mechanisms have not been sufficiently tested. In this study we explored the links between self-reported personality (using a measure of the Big Five) and different forms of job crafting behaviour across a variety of work roles.

Method: Participants were from an occupationally-diverse sample of 5,326 UK government workers. Using an online questionnaire they reported whether they had used each of six types of job crafting behaviours during the previous year. These were (each n = participants reporting each form of job crafting): increasing their personal capacity to do the job (n=289); increasing the amount of positive challenge in their work (n=284) obtaining more resources to help them do the job (n=163); increasing the amount of personal control they had at work (n=140); changing the social climate or collaborations with colleagues (n=146); and reducing hindering demands (n=41). Using ANCOVAs we compared the self-reported personality traits of those reporting each type of job crafting to those in a comparison group reporting no crafting.

Results: There was strong evidence that those reporting five of the six forms of crafting differed from the comparison group on their personality traits. The links between traits and job crafting differed according to the specific crafting behaviour being reported. Crafting to enhance personal capacity was associated with openness to experience. In contrast, crafting to increase job-related resources was associated with emotional stability. Those reporting crafting to reduce hindering demands and to increase personal control reported significantly lower levels of conscientiousness than the comparison group. Extraversion and openness to experience were associated with crafting to increase the level of challenge at work. None of the Big Five personality factors were associated with crafting the social environment. Overall, there was a low prevalence of crafting behaviour.

Conclusions: These findings indicate that trait-specific mechanisms may stimulate specific forms of job crafting. Managers and employees may be able to use information about employee personality to more effectively identify opportunities to enhance person-job fit by adjusting work activities.

Determinants of workers' mental health: Results from the SALVEO study

Alain Marchand¹, Pierre Durand¹, Andrée Demers¹, Victor Haines¹, Steve Harvey², Sonia Lupien¹, Vincent Rousseau¹
¹University of Montreal, Montreal, Canada, ²Concordia University, Montreal, Canada

This study analyses variations in workers' psychological distress, depression and burnout within a model encompassing the stress promoted by constraints-resources embedded in structures of daily life (workplace, family, social networks outside the workplace) and worker individual characteristics (demography, physical health, psychological traits, life habits, stressful childhood events).

Data came from the SALVEO Study. They were collected in 2009-2012 from a sample of 63 workplaces in the province of Quebec (Canada) selected from the population of clients of the insurance company Standard Life. In each workplace, a random sample of employees was

selected to complete a questionnaire using a touch screen monitor. Overall, 2162 employees participated in the survey, for a response rate of 73.1%. Psychological distress was measured with the General Health Questionnaire (GHQ), depression with the Beck Depression inventory (BDI), and burnout with the emotional exhaustion component of the Maslach Burnout Inventory General Survey (MBI).

Multilevel regression models were used to analyze the data. All variables together, structures of daily life and individual characteristics explain 30.6% of GHQ, 47.2% of BDI and 48.0% of MBI. Skill utilization (BDI, MBI), physical (GHQ, BDI) and psychological demands (MBI), abusive supervision (GHQ, BDI, MBI), conflicts (MBI) and job security (GHQ, MBI) are related to the outcomes. For the non-work variables, being in couple (GHQ, BDI), minor children (MBI), family to work conflict (MBI), work-to-family conflict (GHQ, BDI, MBI), strained marital and parental relations (GHQ, BDI), and social support outside the workplace (BDI) associated with the outcomes. Most of the individual characteristics correlated with the three outcomes.

The results of this study suggest expanding approaches in occupational mental health in order to avoid coming to erroneous conclusions about the relationship between work and mental health. Overall, workplace factors associated with task design, demands, social relations and gratifications related to mental health, but family, social support outside the workplace and individual characteristics have a strong influence on the three outcomes studied. Depression and burnout seem to share a similar explanatory structure, while psychological distress appears mostly explained by non-work factors.

Evaluating the relational coordination instrument

Kasper Edwards, Sanne Lykke Lundstrøm

Technical University of Denmark, Lyngby, Denmark

Relational coordination rests on the idea that coordination is a central issue in all work and that coordination happens through communication, which in turn is shaped by relations. Relational coordination is quite interesting because it has been shown to correlate with on-time flight departures and surgical performance. This has prompted the attention of both practitioners and politicians some of who perceive relational coordination as a means to attain better performance.

The relational coordination instrument has been validated as a measure of teamwork from the following perspectives: internal consistency, interrater agreement and reliability, structural validity, content validity. However as relational coordination is being used as a diagnostics tool it is important to examine further if the instrument can measure changes. Indeed we need to know how precise and sensitive the instrument is when organizations are changed.

This paper reports findings from 15 healthcare organizational change projects. The projects received some guidance from external consultants but followed different methodologies and can be considered natural experiments. The projects were measured before and after the change using the relational coordination instrument. Managers were interviewed before the projects and a chronicle workshop (structured group interview) were performed after the project.

This design allows us to compare the qualitative descriptions of change in the wards, with the measured change in relational coordination. We distinguish between statistical and clinical significance. Statistical significance is calculated using T-test. Clinical significance is the minimal amount of change in relational coordination score that is not considered noise. Sensitivity of the instrument i.e. the ability of the instrument to measure changes in relational coordination is analysed by evaluating the scope and depth of changes in work processes and relations. Sensitivity of the relational coordination instrument is surprisingly low and event significant changes e.g. introducing a new role in a work process only show small changes in relational coordination scores.

Impact of development of job control and task-related stressors on resigned job attitude

Anita Keller¹, Norbert Semmer¹, Franziska Tschan², Wolfgang Kälin¹, Achim Elfering¹

¹University of Bern, Bern, Switzerland, ²University of Neuchâtel, Neuchâtel, Switzerland

With more experience in the labourmarket, some job characteristics increase, some decrease. For example, among young employees who just entered the labourmarket, job control may initially be low but increase with more routine and experience. Job control is a job resource that is valued in itself and is positively associated with job satisfaction; but job control also helps dealing with stressors at work. There is little research on correlated changes, but the existing evidence suggests a joint development over time. However, even less is known about the relevance of such changes for employees. Usually, research tends to use mean levels to predict mean levels in outcomes but development in job control and stressors may be as relevant for job satisfaction as having a certain level in those job characteristics. Job satisfaction typically is regarded as a positive attitude towards one's work. What has received less attention is that some employees may lower their expectations if their job situation does not reflect their needs, resulting in a resigned attitude towards one's job. The present study investigates the development of job control and task-related stressors over ten years and tests the predictive value of changes in job control and task-related stressors for resigned attitude towards one's job.

We used data from a Swiss panel study (N=356) ranging over ten years. Job control, task-related stressors (an index consisting of time pressure, concentration demands, performance constraints, interruptions, and uncertainty about tasks), and resigned attitude towards one's job were assessed in 1998, 1999, 2001, and 2008. Latent growth modeling revealed that growth rates of job control and task-related stressors were not correlated with one another. We predicted resigned attitude towards one's job in 2008 a) by initial levels, and b) by changes in job control and stressors, controlling for resigned attitude in 1998. There was some prediction by initial levels (job control: $\beta = -.15$, $p < .05$; task-related stressors: $\beta = .12$, $p = .06$). However, as expected, changes in control and stressors predicted resigned attitude much better, with $\beta = -.37$, $p < .001$, for changes in job control, and $\beta = .31$, $p < .001$, for changes in task-related stressors.

Our data confirms the importance of having low levels of task-related stressors and higher levels of job control for job attitudes. However, development in these job characteristics seems even more important than initial levels.

The validity of a multifaceted measure of experiences of organizational change

Raymond Randall¹, Jonathan Houdmont², Robert Kerr³, Kelly Wilson³, Ken Adley⁴

¹Loughborough University, Leicestershire, UK, ²University of Nottingham, Nottingham, UK, ³University of Ulster, Co. Antrim, UK, ⁴The Northern Ireland Civil Service Occupational Health Service, Belfast, UK

Background: Organizational change can have significant implications for the well-being of employees. This is often reflected in guidance that describes healthy ways to manage change (e.g. the UK Health and Safety Executive Management Standards for work-related stress). Self-report measures of employees' experiences of the way change is managed generally focus on change-related communication and consultation. Recent research shows that employees' experiences of change may be much more multifaceted and complex than this. In this study we tested the incremental validity of a broad and multifaceted measure of employees' perceptions of the management of change processes.

Method: Participants were 2,479 employees from a large government organization. All reported experiencing some significant change at work over the preceding 12 months and responded to the items contained in the Change scale from the UK HSE Management Standards Indicator Tool (MSIT). They also responded to additional items that asked them to evaluate five other facets of change management. These were: the management of any

change-related uncertainty about role requirements and work expectations; the management of diverse employee responses during change; the opportunity for discussion with line managers about advantages and disadvantages of change; the extent of individual involvement in the implementation of change; and their expectations about the outcomes of change. Measures of two variables commonly adversely affected by poorly managed organizational change (work engagement and affective organizational commitment) were included to test the concurrent validity of the change measures. The incremental validity of each of the five items was examined using correlations and hierarchical regressions.

Results: The correlations between the five additional facets and the management standards change scale were low-to-modest ($r < .48$) indicating that these were sensitive to different aspects of employees' experiences of change. The MSIT Change measure accounted for 13% of the variance in employee engagement, with the five additional items together explaining significantly more of the variance (an additional 5%, making 18% in total). Similarly the MSIT Change measure accounted for 14% of the variance in affective commitment, with the new items together explaining an additional 6% (20% in total).

Conclusions: Existing measures may be too narrow to detect important variance in the impact of change management on employee well-being. A focus on only communication and consultation issues may mean that important aspects of the change process do not receive adequate attention.

Workflow interruptions, cognitive failure and near-accidents in healthcare

Achim Elfering, Simone Grebner, Corinne Ebener
University of Bern, Bern, Switzerland

Background: Errors are frequent in healthcare. A specific model was tested that affirms failure in cognitive action regulation to mediate the influence of nurses' workflow interruptions and safety conscientiousness on near-accidents in health care.

Methods: One hundred and sixty-five nurses from seven Swiss hospitals participated in a questionnaire survey.

Results: Structural equation modelling confirmed the hypothesised mediation model. Cognitive failure in action regulation significantly mediated the influence of workflow interruptions on near-accidents ($p < .05$). An indirect path from conscientiousness to near-accidents via cognitive failure in action regulation was also significant ($p < .05$). Compliance with safety regulations was significantly related to cognitive failure and near-accidents; moreover, cognitive failure mediated the association between compliance and near-accidents ($p < .05$). Contrary to expectations, compliance with safety regulations was not related to workflow interruptions.

Conclusions: Workflow interruptions caused by colleagues, patients and organizational constraints are likely to trigger errors in nursing. Work redesign is recommended to reduce cognitive failure and improve safety of nurses and patients.

Anger-related emotions as a source of job burnout among nurses: The moderating effect of trait emotional intelligence

Dorota Szczygiel
University of Social Sciences and Humanities, Warsaw, Poland

Objectives: Knowledge of the emotional demands faced by today's nurses is essential for explaining how work stressors translate into occupational stress and burnout. This study was designed to examine the effects of individuals' affective traits (i.e., dispositional affectivity and emotional intelligence) and negative emotions experienced at work on emotional exhaustion (EE) which is often considered to be the core symptom of the burnout syndrome. The main hypothesis of this study states that trait emotional intelligence (EI) acts as a moderator in the relationship between negative emotions experienced by nurses at work and EE.

Method: The data was collected from 177 nurses working in hospitals in Poland. Participants were on average 35 years old. They were presented with a list of 10 adjectives describing emotions and asked to rate the extent to which they experienced each emotion at work. A principal components analysis with varimax rotation examined the factor structure of the ten emotion items. The first factor contained positive emotions (contentment, pride, enthusiasm and joy, the second factor included anger-related emotions (ARE, annoyance, antipathy, anger), and the third factor sadness-related emotions (SRE, sadness, dissatisfaction, disappointment). Trait EI was measured with the Trait Emotional Intelligence Questionnaire-Short Form (Wytykowska & Petrides, 2007). Positive and negative affectivity were measured using a Polish adaptation of the Positive Affectivity Negative Affectivity Schedule (Brzozowski, 2010). EE was measured with the Polish version of MBI (Pasikowski, 2004).

Results: To test the hypothesis, moderated hierarchical multiple regression analyses were performed. Predictor variables were entered into each regression analysis in three steps. Positive and negative affectivity Step 1, the “main effects” (ARE or SRE and EI) in Step 2, and ARE or SRE x IE product term variable was entered in the Step 3. Results showed that the interaction of ARE and IE term was significant ($\beta = -.26, p < .001$) and accounted for a significant portion of the variance in EE ($\Delta R^2=.04, p<.001$). ARE were positively related to EE among employees who were low in trait EI ($\beta=.55, p<.01$). In contrast, ARE and EE were unrelated among employees who were high in trait EI ($\beta=-.08, p=.66$). The interaction of SRE and IE term was not significant ($\beta=.12, p>.10$) and did not explain any additional variance in EE beyond the main effects.

Discussion: The results of the study demonstrated that trait EI functions as a psychological resource that buffers the negative association between ARE and burnout.

Gender in a University hospital: What do differences between female and male physicians tell us?

Heidi Siller, Angelika Bader, Margarethe Hochleitner

Women's Health Centre of Innsbruck Medical University Hospital, Innsbruck, Austria

It is well-known that the number of women is steadily growing in medicine. It is also assumed that the increasing number of women in the medical profession will contribute to a change in combining family-life and working-life. When looking into socio-demographic variables it is evident that female and male physicians in university hospitals face different challenges: women are less often married than men, have fewer children and are less often engaged in research to the same extent than their male counterparts (e.g. fewer peer-reviewed publications).

The focus in this study is set on physicians in the Innsbruck University hospital (n=111). Data from the HOUPE survey on their family situation (civil status, number of children) and work situation (academic qualification, night shifts, working hours, support from supervisor) show that female and male physicians have to cope with different responsibilities at work. With the use of information from interviews with 20 physicians from the same University hospital additionally to the data of the HOUPE survey conclusions are drawn what challenges men and women face and how to best possible support them in achieving an optimal balance between working and family life.

Work-life balance and Medically Assisted Reproduction (MAR): MAR uses experiences of workplace support

Nicola Payne, Olga van den Akker, Christina Constantinou, Suzan Lewis

Middlesex University, London, UK

Background: Over 40,000 people in the UK each year use Medically Assisted Reproduction (MAR) such as In vitro fertilisation, Yet, there are no statutory entitlements to absence or flexible working, despite the long, physically and psychologically demanding MAR process.

Work-life balance policy focuses on supporting expectant and existing parents and carers, and few work environments have policies in place to support MAR users. Many theories of work-life balance have been proposed. For example, traditional theories focus on the concept of role conflict, whereby conflict is experienced when pressures arising in one role are incompatible with pressures arising in another role. However, research has focused on the experiences of parents and carers. Therefore, this research aimed to explore the experiences of MAR users of combining work and using MAR and identify barriers to and supports for the successful combination of employment and MAR use.

Method: Interviews of approximately one hour were conducted with 31 women and 6 men who were using or had previously used MAR. Interviews were transcribed verbatim and thematic analysis was conducted.

Findings: The time demands of having treatment (i.e. needing time off for appointments and procedures, e.g. scans, blood tests, egg collection, embryo implantation) conflicted with work but for many participants it was the emotional rollercoaster of treatment (including the effects of the drugs) that conflicted most with work. However, work also provided a distraction from the emotional demands of treatment. Job flexibility and a supportive line manager reduced the experience of conflict, especially time-based conflict, enabling some participants to put work on the back-burner to some extent. Line manager support was sometimes just practical (i.e. supporting time-off) but often both practical and emotional (i.e. offering sympathy and concern), especially where there were shared experiences of fertility issues. Unsupportive experiences were also reported. Few workplaces had specific policy/guidance in place relating to MAR use. Mostly other formal policies (e.g. annual leave, sick leave) or informal practices (e.g. shift swaps, making up time later, allowing flexibility) were used to provide support. Participants felt that specific policy was needed to support MAR users and to assist line managers.

Conclusions: While participants imagined or had experienced that line managers and organizations may have difficulties in providing support/implementing policies, where they were supported, they often reported feeling more loyal and committed. Thus provision of support may be mutually beneficial for employees and employers, especially in terms of employee retention and commitment

Work-family interface and well-being in dual-earner couples: A daily diary study examining the Spillover-Crossover Model

Sara De Gieter¹, Lynn Germeys¹, Arnold Bakker²

¹*Vrije Universiteit Brussel, Brussel, Belgium*, ²*Erasmus University Rotterdam, Rotterdam, The Netherlands*

Purpose: Very recently, Bakker and Demerouti (2013) presented their Spillover-Crossover Model, which integrates two lines of research. This model describes the mechanisms through which the work characteristics of one partner spillover to the home domain and further crossover and influence the well-being of the other partner in a dual-earner couple. A series of studies already examined parts of the model (Shimazu et al., 2009; 2011), often applying a dominant focus on the negative side of the spillover and crossover mechanisms. However, to our knowledge, the total Spillover-Crossover Model has not yet been empirically tested, and certainly not on a day to day basis, which is exactly the aim of the current study.

Method: We are currently collecting daily diary data or have an agreement to collect these data from in total 70 dual-earner couples in Belgium. The data collection will be finished by November 30, 2013. Both partners of the couple complete our survey during 10 consecutive working days, before going to bed. In this daily survey, we question the following variables included in the Spillover-Crossover Model (Bakker & Demerouti, 2013): job demands, job resources, work-family conflict, work-family enrichment, social support, social undermining,

happiness and relationship satisfaction. Each variable is measured with three to four items (based on validated scales), using a 7-point scale ranging from 'totally disagree' to 'totally agree'. We additionally examine our participant's work-family boundary management profile (Kossek et al., 2012) as well as characteristics of the family situation (e.g., number and age of the children).

Results: Since the data collection is not finished, we will be able to present the final results during the EAOHP conference in April 2014. The data will be analyzed using the multilevel analysis technique for dyadic diary data proposed by Laurenceau and Bolger (2012).

Conclusions: Based on our findings, we will be able to support the mechanisms described by the Spillover-Crossover Model or to do suggestions to refine the model. Our findings will illustrate the negative as well as the positive side of the spillover and crossover in couples, with special attention to day to day variations in these mechanisms.

Burnout and team absenteeism: Multilevel and cross level effects within a call centre

Chiara Consiglio, Guido Alessandri, Laura Borgogni

Department of Psychology, Sapienza University of Rome, Rome, Italy

One of the most detrimental and costly organizational consequences of burnout is absenteeism (e.g. (Schaufeli, Bakker & Van Rhenen, 2009). The relationship between burnout and absenteeism was mainly studied at the individual level of analysis, however both concepts have been recently conceptualized also at the team level (e.g. Heywood, Jirjahn & Wei, 2008; Bakker, van Emmerik, & Euwema, 2006). In this study the relationship between burnout and absence behaviours was explored beyond the individual level of analysis by testing multilevel and cross-level effects. Moreover, the role of team absence was simultaneously investigated as a consequence, a precursor and a moderator of burnout reactions.

A large sample of 5407 call centre operators, clustered in 186 teams, completed a self-reported questionnaire measuring burnout and time pressure. Absence behaviours were measured using organizational registered records of sickness absence of each team, before and after the subjective data collection. At the team level, initial team absence was hypothesized to affect time pressure, burnout and subsequent team absence. Burnout was hypothesized to mediate the relationship between time pressure and subsequent team absence. Moreover, initial team absence, as a boundary condition that may accentuate individual burnout reactions, was hypothesized to moderate the relationship between time pressure and burnout at the individual level. Multilevel Structural Equation Modeling was used to model the relationships among latent variables representing constructs of interest, at two different levels: individual and team level. The cross-level interaction between initial team absence and time pressure, was modelled as a random slope (Ludke, et al., 2008).

Results largely supported the hypothesized model: at the team level, initial team absence influenced burnout and subsequent team absence, but not time pressure. Burnout in turn predicted subsequent team absence. The cross-level moderating effect of team absence was also confirmed: the negative effect of time pressure on burnout was much stronger in teams where the initial level of absence was high. The main limitation of the study was that self-reported measures were taken at the same point in time. The main novelties are to consider absence behaviours not only as a consequence, but also as a precursor and a moderator of burnout reactions and to focus on team level and cross-level relationships.

Presenteeism as a catalyst of burnout consequences: Effects on health and performance

Chiara Consiglio, Guido Alessandri

Department of Psychology, Sapienza University of Rome, Rome, Italy

The negative consequences of burnout on a number of health disturbances and on work performance are well-known in the literature (e.g. Peterson et al., 2008; Bakker, et al., 2008). A less explored concept associated with both sickness and productivity loss is presenteeism, defined as the act of attending work while sick (Aronsson, et al., 2000). Most of the studies on presenteeism investigated its antecedents and consequences, whereas to our knowledge no previous studies explored the combination of burnout and presenteeism.

The present contribution focuses on the role of presenteeism as a moderator of the relationship between burnout and health disturbances, on one hand, and burnout and performance, on the other. A sample of 796 health care professionals completed a self-reported questionnaire measuring burnout, performance, health disturbances and presenteeism. The hypotheses were tested performing two "moderated" structural equation models (Klein & Moorsbrugger, 2001). In the first model, burnout, presenteeism, and the interaction burnoutXpresenteeism predicted health disturbances, in the second model the same variables predicted work performance. Both models showed an adequate fit to the data.

Results confirmed the role of presenteeism as a "catalyst" of the negative effects of burnout both on health and on performance. The main limitations are the cross-sectional and subjective nature of the study. However, on the basis of these preliminary results, it seems useful to monitor presenteeism level, as a critical condition, potentially able to make precipitate the negative effects of burnout.

The integration of leadership into the Job Demands-Resources model

Wilmar Schaufeli

Utrecht University, Utrecht, The Netherlands

To date, the Job Demands-Resources (JD-R) model is one of the most popular conceptual frameworks in occupational health psychology. Yet an important factor that contributes to employee well-being has not been considered by the model: leadership. Although a few studies have related leadership (notably transformational leadership) to a selected set of elements from the JD-R model, an integration of leadership into the full-fledged JD-R model still stands out. In order to do so, it is reasoned that leadership has a direct as well as an indirect effect on employee well-being, namely through job demands and job resources. On the one hand – following Self Determination Theory – it can be assumed that supervisors will either satisfy or frustrate employees' basic psychological needs for competence, autonomy and belongingness, which is likely to foster employee engagement and burnout, respectively. On the other hand, supervisors have an impact on most of employees' job demands and job resources, which in its turn will impact their levels of well-being.

A field survey was carried out among a representative sample of Dutch employees (N=1,241) to test these assumptions of a direct and indirect effect of leadership on employee well-being. In total twelve job demands were included that were grouped in three categories (qualitative, quantitative, and organizational demands) and twenty-two job resources that were grouped in four categories (social, work, organizational, and growth resources). Three aspects of "engaging leadership" were assessed (inspiring, strengthening, and bonding). Organizational commitment, work performance, proactivity, and employability were included as outcomes. In accordance with the assumptions of the JD-R model, burnout and work engagement mediated the relation between job demands/resources and outcomes.

A structural equation model was successfully fitted to the data, and – as expected – confirmed the indirect effect of leadership on burnout and engagement through job demands and job resources, respectively. However, *no* direct effects of leadership on employee wellbeing were found. Or more precisely, the initial direct and positive effect of leadership on work engagement disappeared after a direct effect of leadership on two motivational outcomes (i.e., proactivity and commitment) was introduced.

Hence the final conclusion is that: (1) leadership can be successfully integrated into the JD-R model; (2) rather than a direct effect on employee well-being, leadership has an indirect effect on burnout and engagement that is mediated by job demands and job resources, respectively; (3) in addition, leadership is associated with motivational outcomes and this association is not mediated by engagement.

Violence in the workplace: Establishing a framework model of understanding and action - application in an urban transport company

Marc Favaro, Jacques Marc
INRS, Vandoeuvre, France

The presentation is dedicated to the INRS work undertaken to establish a framework model of understanding and support intervention on issues related to violence at work. Integrating the key findings of the international literature on these issues, the model consists of eight interacting levels of analysis: “Organizational disruptors” (internal and external), “Unstable rules” (technical, procedural, usual ones, etc.), “Interpersonal conflicts” (suspicion, clans, complaints, etc.), “Operational drifts” (of missions, activities, management, etc.), “Organizational ill-being” (feeling of injustice, frustration, anger, etc.), “Deviant behavior” (violations of procedures, internal thefts, vandalism, etc.), “Social violence” (aggressions, impoliteness, threats, etc.), “Organizational violence” (humiliation, ostracism, physical violence, etc.). Presented in a progressive and interactive way, the model will be further illustrated by the results of an intervention being conducted along with an urban transport company.

The effectiveness of a schema-focused approach in managing work stress

Pavel Kasyanik^{1,4}, Elena Romanova^{2,4}, Maria Galimzyanova^{3,4}

¹*Sankt-Petersburg State Polytechnic University, Sankt-Petersburg, Russia*, ²*East-European Institute of Psychoanalysis, Sankt-Petersburg, Russia*, ³*Sankt-Petersburg State University, Sankt-Petersburg, Russia*, ⁴*Anima Association, Sankt-Petersburg, Russia*

According to Young (2012), Early Maladaptive Schemas (EMS) are among the primary individual determinants of mental health, behavioural and relationship effectiveness. The intensity of EMS which was developed in childhood influences people’s ability to rationally reflect their current situations, evaluate their realistic opportunities and successfully perform according to their goals and values. EMS influence becomes more severe under stress factors at work, such as local failures, bullying behaviour (of clients, contractors, bosses or peers), public presentation, work overload, time deficit, and other challenging or difficult psychological events. Depending on the particular Schema involved (currently 18 EMS identified in schematherapy) the above stressors may cause unpleasant body sensations, overall dissatisfaction, depression, growing anxiety, fears, exhaustion, and even psychological dysfunctions. For example, one highly qualified manager had to select new employees for important positions in a very short time. His Defectiveness Schema initiated fears of failure, worries for his reputation, insomnia, headaches and even thoughts of resigning. Despite the stressful working situation he, evidently, overreacted in current circumstances due to his schema activation.

The effectiveness of Schema-focused approach in coping with work stress was examined among 75 adults (37 females, 38 males) who were employed in middle to upper management positions. They all sought psychological help because of the problems caused by work stress. Measures involved in the research included Young Schema Questionnaire (YSQ S3) and Schema Modes Inventory (SMI), Spielberger State-Trait Anxiety Inventory (STAI), Maslach Burnout Inventory (MBI), Psychological Stress Measurement (PSM-25), clinical interviews and observations. After identifying stress indicators, participants were assigned to the individual (n=17), group (n=13) or both (n=45) sessions according to their choices (each participant spent 12 hours total). All sessions included stress treatment and training in stress management on the bases of the individual schemas profiles. Interventions involved identifying the leading schemas and schema modes with further education and training in self-identification of activated schemas, using “flash-cards”, schema-diaries, modes role-plays, scenarios rescripting, and imagery work.

Due to increase in schemas activation awareness participants became able to cope in “healthy adult” mode with the situations which previously caused severe psychological damage. They reported better self-control in stressful situations, higher emotional stability and growing flexibility in choosing appropriate behavioural response. Significant positive change in stress indicators showed no difference between three groups. It may more depend on individual schema profile rather than on form of the session. Thus the schema-focused approach represents an effective way of stress management at personal level.

The associations of civil aviators' self-disclosures, social supports, stress coping, and flight performance in Taiwan

Chian-Fang Grace Cherng¹, Jian Shiu²

¹*Department of Health Psychology, Chang Jung Christian University, Tainan, Taiwan,* ²*Civil Medical Center, Civil Aeronautics Administration, Taipei, Taiwan*

A line of evidence has shown the health benefits of revealing or self-disclosure. By self-disclosure, the revealers experience catharsis, gain new insights into the secrets, and no longer have to expend cognitive and emotional resources actively hiding the secrets. In addition, a person's social support is a good way or source to face his/her distress. It is important and necessary to explore the relationships among the self-disclosure, social support, stress coping, and flight performance of civil pilots to enhance their occupational health and flight safety.

A researcher-made self-report questionnaire, using a 5-point scale, consisting of 83 forced-choice items related to social support, self-disclosures, stress reactions, stress coping, and work performance, was used in this study. 820 civil pilots answered the questionnaire in this study. Among of them, 84.9% of participants were Taiwanese, and the rest were pilots from other countries around the world (non-Taiwanese pilots).

Applying t-tests, the results showed that Taiwanese pilots had higher scores on emotion support and information support than non-Taiwanese pilots' scores. However, the two groups of pilot scores on financial support and self-disclosure factors were not statistically different. Based on the correlation analysis, the results showed that the high self-disclosure pilots were different from the low self-disclosure pilots on their stress reactions, stress coping, and flight performance. In addition, the high social support pilots were different from the low social support pilots on their stress reactions, stress coping, and flight performance.

The current results are useful for strengthen the rationale and strategies in organizing both pilot screening and safety training programs. Moreover, the current results are of value especially for selecting appropriate counselling approaches to upgrade pilots' occupational health and flight safety.

Child labour and delinquency: The less known psychosocial risk

Heriberto Valdez Bonilla

Jalisco's State Prosecuting Office / Observation, Classification and Diagnosis Center, Guadalajara, Jalisco, Mexico

Introduction: Even when child labour is intended to be illegal in almost all the world, in developing countries it is a reality for children, due to the poor economic and social support those countries can provide to them. Researchers have recognized children's exposition to several psychosocial hazards related to stress, heavy or monotonous work, lack of supervision, insecurity, sexual harassment and abuse, and violence; and hazards associated with working conditions, such as long hours, night work or work in isolation, but they lack to mention delinquency.

Objective: The main objective of this study was to find if there is a linkage between early exposition to psychosocial hazards in the workplace and delinquency, in order to add arguments to promote the improvement of working conditions, facing the fact that child labour remains unavoidable in many developing countries.

Method: This is a transverse and descriptive study, based on a data review of a randomised sample of 300 cases of young offenders, ages 14 to 18 who presented behaviors typified as Robbery, Theft, Burglary, Homicide, Sexual Abuse, Kidnapping and also Drug Charges. Data was collected through a records review and direct interviews with young offenders.

Results: We found that 80% of young offenders were exposed to unhealthy workplaces since an average age of 10. 70% of the offenses they committed could be strongly related to workplace practices (as alcohol and/or cannabis consumption), developed by adult workers in order to cope with inconvenient work conditions (especially when work implies long periods with high rates of excessive workload). Therefore, as unhealthy workplaces promote unhealthy ways of life and/or law trespassing behaviours, children learn and develop work-related behavioural patterns considered as delinquency or they could be victims of delinquency in the workplace.

Conclusion: We conclude that even when child labour shouldn't exist, the fact is that working children are exposed to work-related risks, even delinquency. Promoting global initiatives like SOLVE or Healthy Workplaces, child exposition to workplaces could be the way to help them learn healthy ways of life. This study is relevant in both fields: Health Promotion in the Workplace and Crime Prevention.

Job demands and the metabolic syndrome: Which role do negative affective states and occupational, personal and behavioural resources play?

Ofer Atad, Sharon Toker

Tel-Aviv University, Tel-Aviv, Israel

Evidence suggests that since working hours have risen dramatically during the past half-century (Cha, 2013), both objective and subjective workload have turned into a major health concern. A growing body of evidence suggests that workload may be associated with adverse health outcomes such as Cardio-Vascular Disease (CVD) - the leading cause of death in the world (Kang et al., 2012), as well as with the onset of the metabolic syndrome (MetS), a constellation of cardiovascular risk factors that has been associated with morbidity and mortality (Han & Lean, 2011). Because of the epidemic of over-weight and sedentary lifestyle world-wide, the MetS is becoming increasingly common (Mozumdar & Liguori, 2011). Models of occupational health psychology suggest that negative affective states mediate the effects of stress on health (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002). However, past research has not confirmed these casual relationships (Denson, Spanovic & Miller, 2009).

Drawing on the conservation of resources theory (Hobfoll, 1989), the current study extends past research by prospectively testing whether two negative affective states mediate the

association between job demands and the MetS. The two highly prevalent negative affective states under investigation are job burnout and depression. Job burnout is a long-term process that develops as a result of prolonged exposure to chronic, acute, and/or excessive stressors at the workplace (Shirom, 2003). Depression is recognized as a multisystem disorder with affective, cognitive, and physiological manifestations. Symptoms of depression are triggered by the loss of something significant to the person, such as health, social status or a close person and it is characterized by a period of sadness or lack of interest that is abnormally intense, or abnormally long, and interferes with a variety of personal, interpersonal, and social activities (Toker & Biron, 2012). Moreover, the current study extends prior research by investigating the possible moderated-mediation effects of three resources: a personal resource (self-efficacy), a behavioural resource (physical activity) and an occupational resource (perceived work control), all suggested to attenuate the detrimental effect of resource loss associated with objective and subjective workload, on health.

The study applies a full-panel three-wave longitudinal design to a large sample of employees (N = 2,901) who came to a medical centre between 2002 and 2009 for three consecutive routine health examinations.

The findings will assist health policy makers and organizations to identify and support employees at higher risk, and develop interventions that may buffer the negative cascading effects of workload on health.

Work-related stress mediation in the relationship between safety climate and safety outcomes: An experience in the metal workers sector

Luciano Romeo¹, Margherita Brondino², Gianluigi Lazzarini¹, Francesca Benedetti¹, Margherita Pasini²

¹*Department of Public Health and Community Medicine University of Verona, Verona, Italy,* ²*Department of Philosophy, Pedagogy and Psychology, University of Verona, Verona, Italy*

During the last few years the approach to prevention of injury has also focused on the human factor, in particular highlighting the important role that work-related stress, safety climate and safety culture can play in preventing work accidents. Safety climate has been defined as shared perceptions regarding policies, procedures and practices. Safety climate is a strong predictor of safety performance. A positive climate enhances safer behaviours, whereas in a negative climate unsafe behaviours increase. There is therefore a close connection between safety climate and the occurrence of accidents and injuries.

In this context, this research aims to investigate the relationship between safety climate and the incidence of injuries and accidents in the work environment. Our hypothesis is that work-related stress mediates this relationship.

Safety climate, safety performance, work-related stress and injuries and accidents in the work environment were assessed in 197 metal workers employed in a company in the north-east of Italy. The workers were mainly men (88.2%), divided into 3 age groups: 15 workers (7.8%) were aged less than 30 years, 108 (56.3%) were from 31 to 50 years, 69 (35.9%) were more than 51 years. The validated Integrated Organizational Safety Climate Questionnaire was used to assess three safety climate measures (Organizational, Supervisor and Co-worker). Organizational safety climate (OSC) refers to the workers' perceptions of safety climate in relation to the entire organization; Supervisor's safety climate (SSC) measures perception of the real importance given to safety by the direct supervisor in the work-group; Co-workers' safety climate (CSC) relates to the workers' perceptions of the degree to which safety is a real priority for their work group colleagues. The Italian version of the HSE Management Standards Indicator Tool was used to assess work-related stress. The incidence of injuries and accidents in the work environment were measured using a 3-item scale which refers to accidents without

consequence in the last 3 months, medications in the last 3 months and injuries with absence from work in the last 2 years. Data was analysed using the AMOS package, a software package designed to create structural equation modelling (SEM).

The results of the study seem to confirm that work-related stress mediates the relationship between safety climate and safety outcomes. A low level of work-related stress is connected to a higher safety climate and lower frequency of injuries and accidents in the work environment.

Policy-level interventions in occupational health: What works and when – A UK case study analysis

David Hollis^{1,2}, Stavroula Leka¹, Aditya Jain¹, Nicholas Andreou¹, Gerard Zwetsloot³

¹The University of Nottingham, Nottingham, UK, ²The Open University, Milton Keynes, UK,

³TNO Work & Employment, The Netherlands

There is relatively little peer-reviewed research on the evaluation of occupational safety and health (OSH) regulatory interventions. The research that has been conducted tends to concentrate on legislative rather than voluntary policies, and on occupational safety rather than occupational health interventions (LaMontagne, 2003).

This presentation will detail a qualitative case-study analysis which aims to elicit a more in-depth understanding of the development, implementation and impact of two UK occupational health policy-level interventions: one legislative (i.e. 'hard') intervention: 'The Statement of Fitness for Work' or 'Fit Note' developed by the Department for Work and Pensions; and one non-legislative (i.e. 'soft') intervention: 'The Management Standards for work-related stress' developed by the Health and Safety Executive.

The two interventions chosen for this presentation were taken from a wider research study which examined 15 OSH interventions identified through a literature and policy review. This investigated and mapped the different sources of OSH authority and actors in the UK and the types of hard and soft interventions they had developed. To be considered for analysis, interventions had to meet seven inclusion criteria before being subsequently mapped onto a policy-level intervention matrix grid. This contained circa 50 interventions, from which 15 were then selected for a more in-depth case study analysis. Semi-structured interviews were conducted with the actor(s) responsible for the interventions' development, followed by a thematic analysis of the data.

The results that will be presented will identify challenges and success factors that should be considered in policy intervention evaluation studies. As it will be shown, many process and outcome evaluation elements identified in this study are common with those identified in studies on organizational level interventions in occupational health.

Is sickness presenteeism a risk factor for depression? A two-year follow-up study of Danish workers

Paul Maurice Conway¹, Annie Høgh¹, Åse Marie Hansen^{2,3}

¹Department of Psychology, University of Copenhagen, Copenhagen, Denmark, ²Department of Public Health, University of Copenhagen, Copenhagen, Denmark, ³National Research Centre for the Working Environment, Copenhagen, Denmark

Background: Whereas the primary research focus is still on identifying causes and consequences of sickness absence, interest in the opposite phenomenon, called sickness presenteeism (SP), i.e. working while ill, has recently increased among both researchers and practitioners in the field of occupational health psychology. Apart from negatively affecting job performance, evidence is growing about the adverse impact of SP on employee health. Despite this, very few studies have been carried out so far examining the effect of SP on mental well-being. The aim of this study is to start bridging this gap by investigating the relationship between SP and the onset of depression.

Methods: We conducted a questionnaire-based two-year follow-up study (data collected in 2006 and 2008) on an occupationally heterogeneous sample of 1271 employees from different workplaces in Denmark. At baseline, SP was measured by asking participants to report the number of days they went to work despite being ill in the previous year. Responses were categorized into “no SP days”, “1-7 SP days” and “≥8 SP days”. Depression was assessed at follow-up using the well-validated Major Depression Inventory. We conducted a hierarchical logistic regression analysis to examine the perspective association between SP and depression on initially non-depressed employees. As a sensitivity check, we reran the same analysis in a sub-sample (n=1026) where from the group without SP we excluded the so-called “long-term healthy” employees, i.e. participants without both SP and sickness absence in the previous year.

Results: In the whole sample, 62 employees (4.9%) developed depression at follow-up. After adjusting for a set of individual, occupational and health-related factors (including subclinical depressive symptoms), reporting ≥8 days of SP in a year was significantly associated with an increased risk of depression (OR 2.43, 95%CI 1.06-5.58). A similar result (OR 2.56, 95%CI 1.02-6.45) was replicated in the sensitivity sub-sample, suggesting that the association observed in the whole sample was not overestimated due to comparing groups of workers reporting SP (i.e., participants having experienced a health problem in the past year) with a group free of any illness during the assessment period.

Conclusions: This study is the first providing direct evidence that SP is a significant risk factor for depression. This finding implies that both employers and occupational health practitioners should engage in creating working conditions that limit SP among employees, since working while ill may have negative effects on health, including the onset of highly impacting illnesses such as depression

Incremental variance of core self-evaluation and perceived employability compared to job resources in health and turnover intention

Delia Virga¹, Eva Cifre Gallego²

¹West University of Timisoara, Timisoara, Romania, ²Universitat Jaume I, Castellon, Spain

Objectives: In a changing world, people need to adapt proactively. The core assumption of the Job Demands-Resources Model (JD-R Model; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) is that high levels of job resources are useful to maintain employee well-being and to lower turnover intention. However, also personal resources play a key role. The present study focuses on two variables as personal resources: core self-evaluation and perceived employability. Core self-evaluation (CSE), as a self-concept, is negatively associated with turnover. Also, employability is related with both favourable and unfavourable organizational outcomes (De Cuyper, Van der Heijden, & de Witte, 2011). But, the relationship between perceived employability and turnover intention requires more empirical evidence. The objective of this study is to evaluate the added value that CSE and perceived employability have over job resources in explaining health and turnover intention as work outcomes.

Methods: Data was collected from 284 blue-collar employees (38.3% women) who work in a multinational company from Romania. The age of the respondents ranged from 18 to 61 years ($M = 36.04$, $SD = 10$). Hypotheses were tested using three hierarchical regression analyses with mental health complaints, physical health complaints, and turnover intention as dependent variables.

Results: The results show that colleagues' support and CSE explain mental health at a rate of 22.5%; gender, supervisor support and CSE explain physical health at a rate of 20.1%; and age, supervisor support, CSE and employability explain turnover intention at a rate of 22.6%. In all three cases, CSE was the strongest predictor, adding an extra 14.8%, 12.7% to the models' explanatory potential for both kind of physical and mental health; in case of turnover, both personal resources add an extra 8.3% to the model explanation. Specifically, the two forms of health at work and turnover intention were differently predicted by job resources and personal resources, in special from CSE.

Conclusion: The present study revealed that personal resources have an important role, after controlling job resources, in explaining wellbeing aspects and turnover intention. Moreover, this study offers a new proof for the employability paradox.

Identifying different coordination requirements in medical teams using a hierarchical task analysis

Jan Schmutz, Tanja Manser
University of Fribourg, Fribourg, Switzerland

Introduction: Good coordination in medical teams is related with patient safety and team outcomes (e.g. stress satisfaction with team working). However there is no mutual consent in research about the size of this effect. One reason for these diverse results may be the heterogeneity among such studies concerning their methodological approach and most importantly concerning the tasks under investigation. It is known that team coordination is task dependent and that teams need to adapt their coordination behavior to the task in order to achieve good performance. Only once the task and its coordination demands have been identified may we a) generate specific research hypotheses, b) choose adequate assessment tools and c) interpret and compare the results of different studies in order to d) ultimately derive recommendations for training and work design.

In a first step, we aimed to develop a detailed representation of a medical task including goals, sub-goals and the corresponding subtasks that team members have to execute to reach these goals. In a second step, we identified coordination requirements by eliciting specific coordination behaviors that are most relevant to achieving these goals effectively and safely.

Methods: 1) Hierarchical task representation. Using expert interviews and video analyses we conducted an adapted hierarchical task analysis for a septic shock scenario. According to this representation the scenario was divided into different phases. 2) Defining coordination requirements. Clinical experts were then asked to assign coordination requirements to the previously defined stages of the treatment using taxonomy for non-technical skills (ANTS) as a framework (i.e. task management, team working, situation assessment and decision making).

Results: 1) A detailed hierarchical task representation was developed including a primary goal and four sub-goals. 2) The experts assigned coordination requirements to the previously defined four phases of the treatment. Information management was found to be very important in the beginning of the treatment and task management gained more importance in a later stage of the treatment.

Discussion: Through the hierarchical representation of the task the whole process becomes visible and the representation identifies all necessary tasks. Thus, such a task representation can help clinicians to build a shared mental model of the whole task so every team member is aware what the others should be doing at each stage of the treatment. Further, this knowledge about coordination requirements could help researchers to understand a task and interpret specific results.

Relationship between burnout peculiarities and positive personality characteristics among medical personnel in Lithuania

Loreta Gustainiene
Vytautas Magnus University, Kaunas, Lithuania

Burnout among professionals has been a topic of interest in research literature for decades. Medical personnel are among those who suffer from burnout more often than other groups of professionals. Recent research findings suggest that positive characteristics of employees may serve as a buffer against burnout. Nevertheless, in Lithuania, positive personality characteristics are not extensively studied, especially in relation to burnout.

The aim of the study was to find the relationship between burnout peculiarities and positive psychological characteristics such as self-efficacy, happiness, optimism and hardiness of medical personnel in Lithuania.

The participants of the study were 241 employees working in various Lithuanian medical institutions: 138 (57.3%) physicians and 103 (42.7%) nursing personnel. Burnout was investigated using the Copenhagen Burnout Inventory (CBI; Borritz, Kristensen, 2004). Self-efficacy was measured by the General Self-Efficacy Scale (Jerusalem & Schwarzer, 1979). Happiness was assessed by the Subjective Happiness Scale (Lyubomirsky, 1999). Optimism was assessed by the Revised Life Orientation Test (LOT-R; Scheier, Carver, & Bridges, 1994). Hardiness was measured by the Dispositional Resilience Scale (DRS15-R; Bartone, 2007).

The results of the study showed that burnout scores did not differ depending on sex, position (physicians or nursing personnel), age or tenure of medical personnel in the studied Lithuanian sample. The study also revealed a negative relationship among burnout and positive personality characteristics, i.e. higher burnout scores were related to lower positive personality characteristics both among physicians and nursing personnel. Multiple regression analyses indicated that burnout among physicians was predicted by lower happiness and hardiness levels, whereas among nursing personnel it was predicted by lower optimism and hardiness levels. The results of the study confirm findings of other research studies and call for more research in the area of burnout prevention.

‘Balancing out’ the Management Standards risk model: Associations between the Irish Management Standards Indicator Tool and the WHO-Five Well-being Index

Suzanne Boyd¹, Robert Kerr¹, Jonathan Houdmont², Patricia Murray³

¹University of Ulster, Newtownabbey, UK, ²University of Nottingham, Nottingham, UK, ³Health and Safety Authority, Dublin, Ireland

Introduction: The Management Standards (MS) were developed by the UK Health and Safety Executive (HSE) to help organizations control workplace psychosocial hazards. Although lauded as an example of international best practice, several weaknesses have been identified. In particular, it has been argued that the emphasis on risk and harm is a critical barrier to its widespread adoption by organizations (Cox et al., 2009). Unlike physical hazards, psychosocial hazards can not only impair but also contribute to the promotion of health and well-being. It has therefore been argued that the model could be ‘balanced out’ to include consideration of both negative (risk) and positive (salutogenic) drivers of employee health. Considering these arguments, we explored associations between the Irish MS Indicator Tool (ROI-MSIT) and the WHO-Five Well-being Index (WHO-5), a measure of positive mental health. We hypothesised that individuals who obtained better (higher) scores on the ROI-MSIT and its sub-scales would be more likely to experience positive mental health. We also investigated whether better scores were associated with a greater likelihood of experiencing mental ‘flourishing’, following Huppert and So (2009; 2013).

Method: Between February 2011 and June 2012 we collected data from a wide range of public and private sector organizations that used the ROI-MSIT and WHO-5 (N = 4794). Scores on the overall ROI-MSIT and its sub-scales were collapsed into ordinal categories following the UK HSE’s percentile scoring bands. Logistic regression was performed treating WHO-5 scores as a dichotomous dependent variable (poor or good well-being) and as a trichotomous variable (i.e. including a ‘flourishing’ category). Odds ratios were calculated to estimate the ‘downside risk’ of experiencing poor well-being and the ‘upside risk’ of experiencing good well-being and flourishing in relation to MS scores.

Results: Those in the top ROI-MSIT category were 22 times (95% CI: 16.54-28.79) more likely to experience good well-being than those in the bottom. Ordinal logistic regression revealed those in the top category were 25 times (95% CI: 20.00-33.33) more likely to experience good well-being, and 25 times (95% CI: 20.00-33.33) more likely to experience flourishing. Strong results were also found for the ROI-MSIT sub-scales.

Conclusions: Although additional research is needed to determine the full salutogenic potential of the MS model, our initial findings suggest that following the approach may help employees experience positive mental states rather than just the absence of psychological harm. Small shifts in mean MS scores could potentially move the population towards mental flourishing.

Interpersonal influences and young adults' risk-taking behaviours at work

Simon Pek¹, Sean Tucker², Nick Turner³, E. Kevin Kelloway⁵, Jayne Moorish⁴

¹Simon Fraser University, Burnaby, BC, Canada, ²University of Regina, Regina, SK, Canada,

³University of Manitoba, Winnipeg, MB, Canada, ⁴Parachute Canada, Toronto, ON, Canada,

⁵Saint Mary's University, Halifax, NS, Canada

On a daily basis, the vast majority of young adults interact with parents, siblings, friends, and teachers. As they enter the workforce, their relational circle broadens to include supervisors and co-workers. To what extent does this interpersonal network promote work-related safety behaviours? Despite widespread interest in lowering injury rates among young workers (Breslin & Smith, 2005) and the acknowledged role of supervisors in promoting safe work behaviours (Clarke, 2010), the relative saliency of non-work-related (i.e., parents, friends, teachers) and work-related (i.e., supervisors, co-workers) social influences on young workers' safety behaviours remains unclear.

To address this question, we used data from a short survey that appeared at the beginning of an on-line educational module administered in secondary schools in the Canadian province of Ontario between November 2012 and the end of June 2013. In total, 12,087 young adults (M age = 17.9 years; 56% males) provided complete data.

We asked participants how often six particular social influences encouraged them to be safe at work: "my parent(s)/guardian(s)," "my siblings," "my friends," "my teachers/instructors," "my co-workers," and "my workplace supervisor." Participants used a 5-point, Likert-type scale with response choices ranging from 1 (almost never), 3 (sometimes), and 5 (almost always) to assess the frequency. Using four items from Tucker and Turner's (2011) safety neglect scale ($\alpha = .85$), participants were also asked how frequently they engaged in work-related risk-taking behaviours: "take short cuts that threaten my personal safety," "stop following health and safety policies," "ignore safety problems altogether," and "don't warn co-workers of potential dangers." The same 5-point response scale was used.

Hierarchical multiple regression showed that parents, siblings, friends, co-workers, and supervisors ($\beta = -.08$, $p < .001$) were all related to young adults' work-related risk-taking behaviour, but intriguingly with different signs. The influence of teachers was unrelated ($\beta = .01$, ns) in the presence of the other social influences. Using relative weights analysis (contribution as a percentage of R-square shown in parentheses), supervisors (37.2%) explained the most variance in participants' work-related risk-taking behaviours, followed by co-workers (28.1%), parents (22.9%), teachers (5.6%), siblings (3.4%), and friends (2.9%). In terms of gender and age, supervisor encouragement of safe work behaviour seems especially important for young men: when supervisors encouraged safe behaviour, young men and young women reported equal levels of work-related risk-taking behaviour; however, when supervisor encouragement of safe behaviour was low, young men reported higher work-related risk-taking behaviour than young women.

Spillover and crossover of work-related negative affect among dual-earner couples: The moderating role of self-control strength

Christian Dormann^{1,2}, Stanley Friedemann¹, Zhaoli Song³, Verena Hahn¹

¹*Johannes Gutenberg University Mainz, Mainz, Germany*, ²*Ruhr University Bochum, Bochum, Germany*, ³*National University of Singapore, Singapore, Singapore*

Emotional demands such as emotional dissonance at work (ED-work) have been found to be a substantial source of employees' stress. We propose that emotional dissonance at home (ED-home) has an additional impact on employees, leading to prolonged stress reactions and preventing successful unwinding from job stress. We further propose that better emotion regulation, which should be fostered by self-control strength (SCS), acts as a buffer that helps reducing negative affect (NA) more quickly.

Work-related stress responses such as NA spill over from work to home. Stress responses also tend to cross over between spouses (from actor to partner). Thus, having an employed partner might contribute to prolonged spillover effects by crossover of NA. As a mediating mechanism, we propose that being exposed to the partner's negative emotions causes ED-home, which perpetuates NA caused by ED-work. Conversely, an actor's own NA caused by his or her ED-work may cause ED-home for the partner. Stronger SCS should, however, promote emotion regulation, which prevents NA to cross over between spouses. In sum, we propose a model of SCS-conditioned reciprocal emotional cycles (Hareli & Rafaeli, 2008) triggered by affective events at work and home.

We tested our hypotheses using a diary design with 98 dual-earner couples who responded to a paper-and-pencil baseline survey (T0) and to 5 surveys per day (T1=morning, T2=middle of work shift, T3=end of work shift, T4=around dinner, T5=before bedtime) on 8 work days using mobile phones or smartphones. SCS was measured at T0; NA was measured at each time point; ED-work was measured at T3, ED-home was measured at T5; Emotions expressed (EExpressed) towards the partner during the last couple of hours were measured at T4; one's partner's emotions perceived (EPerceived) were measured at T4.

We used the Actor-Partner Interdependence Model (Kenny et al., 2006) for analyses. Changes of NA were modelled across the day by controlling for prior NA. All hypotheses were confirmed. ED-work and ED-home both predicted subsequent NA. EPerceived contributed to ED-home. EExpressed by females predicted EPerceived by their male partners (and vice versa). As hypothesized, this effect was buffered by SCS.

The influence of perfectionism on employees' work day and evening well-being: A Day-Level study of British workers

Sonja Carmichael, Paul E. Flaxman
City University London, London, UK

Research has established that certain forms of perfectionism are related to poorer mental health in student and clinical populations. However, only a small number of studies have investigated the influence of perfectionism on employees' functioning.

This multiple day-level study explored the outcomes of adaptive perfectionism (high personal standards without chronic self-criticism), and maladaptive perfectionism (concern about making mistakes and feeling that perfectionist standards are being imposed by others).

A total of 130 workers drawn from healthcare, educational and local government organizations in the UK completed two prominent perfectionism measures, followed by measures of well-being twice per day for five consecutive work days (1300 observations in total). This research design captured workers' experiences during the work part of each day and again during each evening after work.

Multi-level analyses revealed that only a maladaptive form of perfectionism was related to higher levels of negative affect and perceived stress, both during the work part of the day and during evenings. These relationships remained after controlling for neuroticism, conscientiousness, and various work characteristics. The maladaptive effects of perfectionism during the work day were partially mediated by the tendency to respond to the day's stressful events with avoidant coping strategies. During their evenings, maladaptive perfectionists reported higher levels of work-related worry and rumination, resulting in impaired post-work well-being.

Taken together, these findings support the view that perfectionism is a multidimensional construct, with important implications for employees' work and leisure time well-being.

“The Needy Institution”: Work Contact Outside of Regular Working Hours.

Scott Schierman¹, Paul Glavin²

¹University of Toronto, Toronto, Canada, ²McMaster University, Hamilton, Canada

The idea that work encroaches on the lives of its employees is hardly new. Four decades ago, Lewis Coser characterised work as a “greedy institution”—one that has little compunction about extracting time and attention from its workers. Rapid changes in communication technologies and their increasing use in the workplace have modified the ways that this “greedy” impulse can access employees. This has led to greater permeability in the boundaries between work and non-work life and the integration of these once more separate spheres. Some of these changes are due to the transformation of work itself, especially the greater prominence of flexible arrangements in the temporal parameters of work. The global economy has fuelled the demand for flexible schedules and remote work options—and enhanced the communication technologies that facilitate it. Although these technologies can enhance functioning, they may also generate disruptions outside of the workplace that require border management. As the pace, intensity, and complexity of work expands over time, these processes engender a more normative intrusion of work contact and the apt characterisation of work as the “needy institution.”

The present study seeks to advance knowledge by investigating two features of these processes: the frequency that workers *send* and *receive* work-related communications outside of regular working hours (for shorthand, “work contact”). The implications of work contact for role functioning—especially “work-life balance”—encourages a more systematic analysis of the ways that social statuses and work conditions influence it. The current study addresses three main questions: (1) What is the social distribution of exposure to work contact in the population? (2) Which work conditions influence exposure to work contact and, in turn, contribute to the social distribution of contact? (3) Do job-related resources moderate the association between job-related demands and work contact?

Data from a national sample of workers—the 2011 *Canadian Work, Stress, and Health Study*—produced the following key findings: (1) men report more work contact than women because of their higher earnings and more flexible work arrangements; (2) the well-educated report more work contact because of the nature of their work; however education effects remain net of demands and resources; (3) older workers report less work contact than workers in the middle years—and, net of earnings, workers in their 20s report the most contact; and (4) a set of job-related resources and demands predict more work contact.

Slacking At Work: Development and Validation of the Soldiering Scale.

Toon Taris, Baran Metin, Maria Peeters

Utrecht University, Utrecht, The Netherlands

Although nowadays many employees experience some kind of work pressure, modern work also offers opportunities to delay tasks or to engage in non-work related tasks during work hours – and some workers may to some degree use these opportunities. This phenomenon is

called “soldiering” (cf. Taylor, 1911). Soldiering is defined as the (un)conscious delay of work-related tasks during work hours. It is simply working at the slowest pace possible. This presentation has two aims: (1) to introduce a newly developed instrument that taps soldiering behaviour, and (2) to present evidence on the reliability and validity of this instrument, including its relationships with well-being, boredom and work engagement. To explore these aims, two studies were conducted.

Scale development: Study 1 describes the development and internal validation of the Soldiering Scale. A convenience sample of 182 participants completed a questionnaire containing 24 Likert-type items that described a number of behaviours in which workers could engage in while at work, and that were unrelated to their work tasks (e.g., playing computer games, taking extra-long breaks or texting with family or friends). Confirmatory factor analyses were conducted, showing that soldiering is a uni-factorial construct that can reliably be measured with 8 items.

Validation: In Study 2, this questionnaire was further validated by relating the soldiering concept to other, potentially relevant concepts. We expected that high levels of soldiering would be associated with low levels of work motivation, low levels of work engagement, high levels of boredom, high levels of procrastination, and high levels of other types of counterproductive work behaviour. Drawing on data from 200 workers, structural equation modelling was used to test a model relating soldiering to these concepts. In the final model, high levels of soldiering were associated with high levels of boredom at work, high levels of counterproductive work behaviour, and high levels of procrastination at work.

Conclusions: The results help us to better understand the nature of soldiering, and its differences and similarities with other constructs that are generally measured in research on employee well-being. The study concludes that the soldiering scale is a valid measurement to evaluate employees' reduced work pace. Managers are encouraged to deliberately focus on reduced motivation because it is related to boredom, which is an important indicator of work outcomes such as soldiering, procrastination and counterproductive work behaviour. The practical and theoretical implications of the findings will be discussed.

RISE@Work: The Development and Piloting of a Web-based Workplace Intervention for Reducing Sitting Everyday.

Jason Lacombe, Linda Trinh, Subha Ramanathan, Tanya Scarapicchia, Kelly Arbour-Nicitopoulos, Guy Faulkner
University of Toronto, Toronto, Ontario, Canada

Background: Sedentary behaviour, in particular sitting time, is an emerging public health concern associated with an increased risk of cancer, and cardio-metabolic health diseases. Interventions are required to reduce employee sitting time throughout the workday since the adverse health effects of prolonged occupational sitting may have indirect, deleterious effects on work performance attributable to ill-health. An interactive web application and research platform was designed to assist Canadian employees with reducing sedentary time and increasing physical activity (PA) (RISE@Work).

Purpose: The purpose of this study was to develop and pilot an interactive, web-based Canadian workplace intervention that aims to reduce occupational sitting time among office based workers.

Methods: RISE@Work is an 11-week web-based program. It contains a number of key features including a dashboard area where employees can input their data and receive visual feedback on progress, interactive features, progressive release of behaviour change strategies, an automated feature for alerting participants to stand at regular intervals, and a walking route application (compatible with mobile phones) contextualised to the physical

environment of the workplace. Primary outcome measures include accelerometer-determined sitting time and pedometer step counts. Self-reported sitting habits, PA, work experiences (i.e., job characteristics and hours) and work limitations will be assessed. Objective measures of website usage will be tracked using custom-built and secure website analytics.

Results: Twenty-five participants completed the baseline phase of the pilot study. Baseline characteristics include: mean age=42 ± 9.2; 92% female; body mass index=26.2 ± 5.7; 80% in professional occupations; 76% received university/higher education; and all were in full-time positions. The Work Limitations Questionnaire produced a Productivity Loss Index of 3.4% ± 3.2, with participants reporting more work limitations on the Time Management scale (M=13.0 ± 17.5) compared to the Physical Demands scale (M=10.2 ± 12.0), Mental-Interpersonal Demands scale (M=12.0 ± 14.2), and Output Demands scale (M=9.0 ± 14.2). Twelve participants were asked to provide accelerometer data on sitting time and PA. They spent on average 7.0 ± 1.1 hours sitting on a typical day during the week.

Conclusion and Implications: Follow-up data will be collected in December 2013. Participants experienced few work limitations at baseline but engaged in a high proportion of sedentary time. This pilot study provides preliminary evidence as to whether a web-based platform can reduce sitting time among office-based workers.

Acknowledgements: Funding for this project was provided by Cancer Care Ontario.

A Sample Analysis of the Organizational Ability Evaluation CO 94 & CO 2000.

Ioana-Daniela Oros, Monica Albu

¹SC ELECTRICASERV SA, SISE „Transilvania Nord”, Cluj-Napoca, Romania, ²„Gheorghe Baritiu” Institute of History, Cluj-Napoca, Romania

Our research aimed to foster evidence to support the validity of the organizational ability evaluation tools CO 94 & CO 2000. The samples consist of a city plan, where objectives are noted as well as a list of actions. Each action is related to a certain objective, which can only be made at a specified period of time and has an indicated duration. Moreover, some actions are only possible if other actions were previously completed. In addition, there are guidelines for when the whole activity in the program must take place. The task, in order to solve the sample, was to establish an activity plan for the CO2000 test and two activity plans for the test CO94 respectively, meeting the requirements indicated in the list of activities.

We used a sample of 54 individuals within higher education (29 men and 25 women), 17 in management positions and 38 in executive positions. The participants were given the following measures: ability of decision, text understanding, white-collar skills and evaluation questionnaire of personal autonomy AP (all of them in the test battery CAS ++) and two samples of a test battery of math's ability evaluation tests (Series of numbers and Spatial perception). Individuals holding executive positions were given the sample CO2000, and those with management positions, the sample CO94 (which is more difficult).

We concluded that, in the case of the men, the number of errors made regarding the CO2000 sample is linked directly to their scores in cognitive autonomy as determined by the questionnaire AP ($\rho = 0.518$, $p = 0.042$). In the case of the women, the number of errors regarding the CO94 sample is linked inversely to their scores in spatial perception ($\rho = -0.641$, $p = 0.043$) and text understanding ($\rho = -0.889$, $p = 0.022$). Further research is required to establish whether the two samples are valid.

Linking Customer Sovereignty to Employee Strain: The Mediating Roles of Experienced Customer Aggression and Perceived Organizational Support.

Aaron Schat¹, Camilla Holmvall², Sonya Stevens²

¹McMaster University, Hamilton, Ontario, Canada, ²Saint Mary's University, Halifax, Nova Scotia, Canada

Customer sovereignty involves an organization giving priority to customers by expecting employees to behave in ways that satisfy and avoid upsetting the customer. The concept of customer sovereignty has its roots in organizational sociology (Du Guay & Salaman, 1992; Korczynski & Ott, 2004) and is reflected in the mantra, “the customer is always right.”

The present study investigates whether customer sovereignty is associated with two indicators of employee strain, health and counterproductive work behaviour (CWB) and whether these are directed toward the organization (Penney & Spector, 2005), via two mediating mechanisms – increased exposure to customer aggression and reduced perceptions of organizational support (POS; Jawahar, Stone & Kisamore, 2007).

Perceived customer sovereignty consists of two dimensions. The first, labelled *customer focus*, entails a profound focus on achieving customer satisfaction. This would be reflected in employees doing whatever it takes to satisfy a customer. The second, labelled *tolerance of customer aggression*, entails an “at all costs” notion that reflects tolerance of rude or aggressive behaviour by customers. This would include, for example, capitulating to hostile customers.

The proposed model was tested with structural equation modelling (observed variable path analysis) using data from 181 frontline customer service employees. Model fit was acceptable ($\chi^2 (df = 8) = 13.15, p = .11$. GFI = .98; CFI = .96; TLI = .92; RMSEA = .06) and the results were generally consistent with the authors hypotheses. Tolerance of aggression was positively associated with employee exposure to customer aggression and negatively associated with POS, whereas customer focus was not related to either variable. In turn, customer aggression was positively associated, and POS was negatively associated, with employee strain and organization-directed CWB.

These results suggest that prioritising customer service, as reflected in a customer focus, does not, in itself, put employees at risk of customer aggression nor does it lead employees to feel unsupported. Rather, when the prioritising of customer service and satisfaction results in practices that, implicitly or explicitly, reflect a tolerance of customer aggression, then employees are at greater risk of experiencing aggressive behaviour from customers and are more likely to feel that their organization does not support them. In turn, experienced customer aggression and lower POS were associated with poorer health and more CWB directed toward the organization. The limitations and future directions of the research will be discussed.

Employee Understandings of Social Support and the Implications for Theory and Practice: Insights from a UK Case Study.

Tina Kowalski

University of Edinburgh Business School, Edinburgh, UK

Background: Stress and mental health issues are now the main reason for sickness absence in the UK (CIPD/Simplyhealth, 2012). Much evidence exists to indicate that social support can affect both physical (Shumaker and Brownell, 1984) and mental health (Stansfeld et al., 2002). Indeed, a number of theories on workplace well-being acknowledge the role of social support (e.g. Karasek and Theorell, 1990). However, to date little research has explored lay perceptions of social support.

Aim: The purpose of this study was to investigate what the term social support meant to individual employees in order to gain a greater understanding of social support, how it may affect employee well-being, and the implications of this.

Method: Semi-structured interviews (n= 31) were held with employees from a large public sector organization in the UK. A two week diary phase was subsequently completed by eleven of the interviewees. All eleven diarists attended for a second interview.

Findings: Drawing on principles of grounded theory (Glaser and Strauss, 1967; Charmaz, 2006) qualitative analysis of the interviews revealed that social support was in fact an uncommon term for many respondents. For those who did offer a definition of what social support meant to them, a broad range of responses were given. Some of these reflected existing domains of social support, such as perceived versus received support (e.g. Rhoades and Eisenberger, 2002) or emotional versus instrumental support (e.g. House, 1981; Semmer, 2008). However, the analysis also illuminated less commonly explored dimensions of social support such as distal versus proximal support. Despite being relatively under-stated in existing theories, in this sample the potential negative effects of social support were also highlighted.

Conclusions: Greater understanding of the meaning and value of social support to employees has relevance for theory development, for example, to what extent do existing theories which incorporate social support (e.g. Karasek and Theorell, 1990; Bakker and Demerouti, 2002) reflect the complexity of employee perceptions of social support in today's society? Findings from this study also have particular pertinence to HRM professionals in the 21st century in terms of informing policy and practices aimed at enhancing employee well-being which could ultimately have benefits for both individual and organizational outcomes.

Health Promotion Targets In Austria From A Public Health View.

Guido Offermanns

University of Klagenfurt, Carinthia, Austria

The current situation in the health sector in Austria can be characterised by the absence of quality standards, cost-intense processes, traditional roles and structures, divergent interests of involved groups, and a general lack of an established health promotion policy approach. Given these circumstances, economists, politicians, and health scientists have tried to restructure the existing health system and health policy in Austria.

The aim of this paper is to present a target-oriented health reference framework that considers the interests of several groups (e.g., medical association, hospital cares, social affair committees), qualitative and quantitative outcome variables, and economic and social requirements. The target-oriented health reference framework answers questions such as: What should the situation be? How can the goals be quantified? Who should make which contribution to solve the above described problems? Which policy areas have to collaborate?

The development of the target-oriented health reference framework took place in two steps. In the first step, existing target-oriented health programs in selected Western European countries (e.g., Germany, Great Britain, Norway, Sweden) and North America (e.g. Canada) were analysed. The analysis showed that existing programs in other countries have little to no impact on the health system in Austria. In the second step, the framework was designed considering the unique situation of the Austrian health system. The framework represents an instrument with which specific goals of individuals with certain illnesses (e.g., cancer, mental health diseases, cardiovascular diseases) or vulnerable groups can be developed. A central feature of the reference framework is the management-oriented aspect which is described by the generic term "cross-linked multi-sectorial health care and health promotion". In sum, the goal-oriented health reference framework offers a new orientation in Austria i.e., guidance for the different policy areas as well as for the involved parties (e.g., patients, insured, citizens, self-help groups).

Psychosocial Work Factors and Upper Limb Disorders: Systematically Ruling Out Other Work-Related and Non-Work-Related Alternative Explanations.

Birgit Greiner, Dervla Hogan, Sheilah Nolan
University College Cork, Cork, Ireland

Psychosocial work characteristics are well known as risk factors for work-related musculoskeletal disorders. Whereas the majority of research focuses on work-related back injuries, the role of psychosocial work issues in relation to work-related upper limb disorders (WRULDs) are less known. It has been argued that alternative explanations may account for associations between psychosocial work issues and ULDs, such as physical work load, previous injuries, life style-related issues (obesity, smoking) and mental health.

The main aim of this study was to determine: (1) the distinct pattern of associations for psychosocial work characteristics with two different measures of ULDs: annual prevalence of UL symptoms and incapacitating symptoms, and (2) whether these associations persisted when systematically ruling out alternative explanations.

347 Irish manual therapists (physical, athletics and physiotherapist) were recruited using; proportionate sampling for hospital-based, and random sampling for self-employed therapists using data bases of professional bodies. This study measured psychosocial working conditions by using selected scales from the Copenhagen Psychosocial Questionnaire. Physical work factors were ascertained as daily duration of manual therapy, physical exertion (Borg scale) and repetitiveness of work motions. Mental health was measured by the GHQ. The 12-month prevalence of ULD and of incapacitating UL symptoms was measured by the Nordic questionnaire with an additional question of leisure time injuries to the upper limbs. Logistic regression models were built with each psychosocial risk factor as a predictor and adjusting stepwise for lifestyle, previous leisure time injuries, mental health and physical work factors. All analyses controlled for age and gender.

The annual prevalence of UL symptoms in any body part was 82.5%; and 25.6% reported incapacitating symptoms. Influence at work, predictability, and social support were most consistently associated with incapacitating ULDs. The associations remained significant when adjusted for alternative associations, although the attenuated when controlling for mental health. Emotional demands and quantitative demands were not associated with the outcomes. In comparison, psychosocial factors were more strongly associated with incapacitating symptoms whereas both psychosocial and physical work factors equally and independently accounted for the annual prevalence of ULDs.

Psychosocial work factors appear to play a significant role for WRULDs in manual therapists independently of physical work load, life style, mental health and previous leisure time injuries. Careful differentiation between symptoms that may indicate an initial stage of a disorder and incapacitating or more severe symptoms should be observed in future research as they may reveal distinct patterns of associations.

Stress, Conflict And Psychological Distress In The Working Population: What Is The Role Of Positive Mental Health?

Kathryn Page¹, Allison Milner¹, Angela Martin², Tony LaMontagne¹

¹*University of Melbourne, Melbourne, Australia*, ²*University of Tasmania, Tasmania, Australia*

Exposure to workplace stress and conflict is associated with an increased risk of developing a mental health disorder and psychological distress. Research in this area has identified a wide range of moderating variables. However, there has been little focus on the potential for positive mental health (PMH) - defined as the presence of positive feelings and functioning to attenuate this relationship. Identifying how strengths and other positive capacities, including PMH, can be promoted in order to improve employee wellbeing remains an increasingly important function of occupational health psychology.

The objective of this paper is to explore whether PMH interacts with perceived stress and conflict at work order to reduce their harmful effect on employees' mental (ill)health, indicated by psychological distress, using two waves of population-level data. Specifically, it was predicted that employees with the highest levels of PMH would have lower levels of psychological distress associated with stress and conflict at work than those with lower levels of PMH.

The study utilised two waves (T1 and T2) of matched data from a population-level sample of older, working Australian adults (n= 3,291). Variables included psychological distress (distress) which was measured using the Kessler 6 (K6); experience of serious stress or conflict at work was measured with a single-item; and, PMH was measured through using the Warwick Edinburgh Mental Wellbeing Scale. Experience of conflict or stress at work at both T1 and T2 was associated with small but significant increases in psychological distress at time 2 in both univariate and multivariate models. The results of the interaction test were significant and demonstrated that the relationship between stress or conflict at work and distress varied depending on an individual's level of PMH. Specifically, PMH buffered the impact of stress and conflict on distress but only for those with the highest levels of PMH.

The results showed that individuals with high levels of PMH are less likely to experience distress after experiencing serious stress or conflict at stress. This may indicate that these individuals are resilient to stress and conflict at work. However, such resilience only occurs when individuals demonstrate higher than the population level average of PMH. Thus, PMH is an important individual level factor that should be promoted by organizations. However, it does not negate the need for primary prevention. This supports the integrated approach to workplace mental health, which involves both preventing work-related mental illness and promoting mental health regardless of the cause.

Appraising Teamwork: The Role Of Coordination In Predicting Appraisals Of Threat And Challenge.

Clark Calabrese, Megan Dove-Steinkamp
University of Connecticut, Storrs, CT, USA

When individuals work together as a team, the team can perform tasks individual team members could not perform alone (Salas, Dickinson, Converse & Tannenbaum, 1992). Accomplishing performance goals as a team often requires close coordination among teammates. Maintaining coordination appears to be a potential source of stress that is unique to teamwork (Calabrese, 2013). However, it remains to be seen how team members appraise this unique stressor. It was hypothesised that appraisals of one's own stress would be predicted by task characteristics while appraisals of the team's stress would be predicted by the quality of coordination. Based on the preliminary results from an ongoing study, this presentation evaluates how team members appraise the stress associated with a teamwork context.

Participants were 51 undergraduates in 17 three-person teams. Teams completed five 10minute trials of a laboratory task. Following each trial, individuals completed a survey assessing stress, demand, control, social support and coordination. Measures of individual and team stress included threat and challenge subscales, which were adapted from the Stress Appraisal Measure (Peacock & Wong, 1990).

The results show that the threat and challenge dimensions of stress, at both the individual and team levels, were explained by different sets of stressors. For each outcome, demand, control, social support and coordination were tested as stressors in a stepwise multilevel model. The same predictors explained individual and team threat: demand, control, and support ($p < .05$). The only predictor of appraisals of individual challenge was control ($p < .001$); appraisals of team challenge were predicted by control ($p < .001$), support ($p < .05$), and coordination of the team ($p < .05$).

Individuals working on a team appraised the stress of team coordination differently than the stress of their own individual task activities. Appraisals of threat for the individual and threat for the team were the same and neither was influenced by coordination. However, appraisals of challenge for the individual and challenge for the team were distinct: coordination between teammates was associated with challenge for the team, but not for the individuals. Individuals working on teams may be able to distance themselves from the added challenges of teamwork, viewing it as a positive stressor for the team.

Stress and Wellbeing at Work: An Update.

Andy Smith

Cardiff University, Cardiff, UK

Historically, much research on stress has focused on job characteristics that lead to increases in stress. This has led to epidemiological studies that have examined the association between these factors and perceived stress and health outcomes. One of the problems with such approaches is that job characteristics are often studied in isolation or in small groups. This is not representative of the real life situation where it is essential to examine the combined effects of occupational stressors. Research that has addressed this topic will be summarised and discussed during the presentation.

In addition to job characteristics it is now widely accepted that one should consider individual resources and differences. This can take several different forms, for example, some individual resources may be strongly linked to the nature of the job (e.g. control and social support). Other individual differences may reflect methods of appraising or coping with stress. In addition, personality may be an important factor in determining whether stress leads to negative outcomes. Demographic factors have also been shown to influence perceived stress and these must be included in models of the stress process. The second part of the presentation will describe a model that examines stress in terms of demands, resources and individual effects.

Recently there has been a shift in emphasis away from negative issues such as stress and towards the positive effects of work on wellbeing. A good job can clearly increase wellbeing and it is important to determine which work and individual characteristics are associated with positive outcomes. The research that has addressed this particular topic and the main findings will be summarised in the third part of this presentation.

In summary, one of the major changes in stress research has seen a move away from considering single risk factors and outcomes to adopting a multivariate approach to the topic. While this approach can be adopted in fundamental research it is more difficult to apply in practice because the presence of many measures leads to lengthy measuring instruments. This problem has been resolved by using short measures and demonstrating that they produce similar results to longer established questionnaires. The final part of the presentation will summarise this approach.

Impaired Sleep and Psychological Tension as a Stress Indicator.

Jesper Kristiansen¹, Sannie Vester Thorsen¹, Andreas Friis Elrond¹, Malene Friis Andersen¹, Pernille Uhrskov Hjarsbech¹, Roger Persson², Anne Helene Garde¹, Vilhelm Borg¹, Reiner Rugulies^{1,3}

¹*The National Research Centre for the Working Environment, Copenhagen, Denmark,*

²*Department of Psychology, Lund University, Lund, Sweden,* ³*Department of Public Health, University of Copenhagen, Copenhagen, Denmark*

Objectives: The purpose of the present study was to validate a brief stress indicator that can be used for monitoring stress in population surveys.

Methods: The stress indicator was based on the concurrent prevalence of sleep problems and psychological tension. It was hypothesised that sleep problems and tension would show a synergistic interaction with regard to signs of stress (which were defined as a high number of subjective health complaints (SHC), low vitality, and low job satisfaction).

Further, it was hypothesised that the stress indicator would be associated both with exposure to specific psychosocial working conditions and with health problems (defined as sickness absence). These hypotheses were investigated using a sample of 6,744 respondents (51% women) from the Danish Working Environment Cohort (DWECS) in 2005. Associations between the stress indicator and the signs of stress and exposure to specific psychosocial working conditions were analysed cross-sectionally. The associations of the stress indicator with the risk of sickness absence were analysed prospectively.

Results: The combination of sleep problems and tension was associated with synergistically increased risk of eight SHCs, including depressed mood, concentration problems, heart palpitations, and stomach pain. Furthermore, synergistically increased risks were observed for low job satisfaction, low vitality as well as for the working conditions high effort-reward imbalance and long working hours. The combination of high levels of sleep problems and tension was also associated with job strain and reported exposure to bullying. The stress indicator predicted risk of long-term sickness absence in a two year follow-up period.

Conclusions: The results provide support for the view that the proposed indicator based on the simultaneous presence of psychological tensions and sleep problems is a valid indicator for stress.

Ten Years of HSE's Management Standards for Work-related Stress: Problems and Prospects.

Colin Mackay¹, David Palferman¹, Peter J. Kelly³, Paul Buckley², Paul Cushion¹

¹*Economic and Social Analysis Unit, Corporate Science Engineering and Analysis Division, Health and Safety Executive, Liverpool, UK*

²*Statistics Branch, Corporate Science Engineering and Analysis Division, Health and Safety Executive, Liverpool, UK*

³*Human Factors Unit, Hazardous Installations Directorate: Health and Safety Executive, Liverpool UK.*

The 1990's saw a considerable rise in the number of UK workers reporting work-related 'stress'. In response, in 2000, The Health and Safety Commission (HSC) set a series of targets which included the reduction of work-related stress. As a result, a 10-year priority programme was devised, which included development of the 'Management Standards' that would allow organizations to gauge their performance and facilitate continuous improvement. The Management Standards themselves consist of both a desirable 'state to be achieved' for individual stressors and a process by which organizations can assess and manage their exposure to such stressors.

The design of the stress priority programme was predicated on action being taken across UK industry – that is – applied to a large proportion of the UK workforce. It is therefore a population approach rather than targeting existing 'cases' or high-risk groups. The requirement to reach the national targets necessitated the development of an Implementation Logical Model (ILM). The ILM made a number of assumptions at a population level about the following:

- Awareness of the Management Standards;
- Uptake of the Management Standards approach;
- Their proper implementation;
- The choice and effectiveness of interventions at an organizational level.

Progress towards the targets was driven by the extent to which these assumptions were met. At an organizational level, the Management Standards enable the assessment of current exposure to stressors and then devise and implement action plans to reduce that risk, followed by a subsequent re-assessment. The change pathway requires workforce and management to collaborate in risk assessment and action planning.

To test the process an implementation plan based on five priority sectors (Health, Education, Central and Local Government and Finance) was developed. This required the collaboration of (initially) 100 organizations to enable a full evaluation of the Management Standards process to be undertaken. Especially important was to understand any obstacles in implementing the Management Standards and thus to refine the process and to gauge the likely impact on overall targets via the ILM. The Workplace Health and Safety Survey (WHASS) and the Labour Force Survey (LFS) were used to assess trends in prevalence and incidence of work-related ill-health and associated sickness absence, and a module (Psychosocial Working Conditions) of the ONS Omnibus Surveys was used to assess trends in exposure to work stressors.

Using data from the WHASS, this presentation will describe how the impact of estimates made in the ILM was over-optimistic, although awareness and uptake were higher in the five priority sectors. Across the ten years of the programme, significant reductions in both incidence and prevalence of self-reported work-related stress from the LFS Self-Reported Work-Related Illness data were found. These data will be discussed in relation to the GB targets. Between 2004 and 2010, of the six psychosocial working condition domains, five showed improvement (two significantly); whereas one showed a significant worsening. The five key sectors that were targeted represented a quasi-experimental intervention group against which all other workforce sectors could be tested; thus these can be considered to represent an unmatched comparison. The target sectors showed a greater improvement in reduction of cases than those sectors that were not especially targeted. Finally, a cost-benefit analysis that accrued as a result of the programme will be discussed.

Organizational Mapping: Determining Organization-specific Factors for Developing Interventions in Organizations.

Arjella Van Scheppingen¹, Kristin Ten Have¹, Gerard Zwetsloot¹, Gerjo Kok², Willem Van Mechelen³

¹*Netherlands Organization for Applied Scientific Research TNO, Amsterdam, The Netherlands*

²*Maastricht University, Maastricht, The Netherlands*

³*VU University Amsterdam, Amsterdam, The Netherlands*

The work-setting is a major health promotion context. Interventions in workplace health promotion are often organised in a similar way as those for the promotion of public health, and do, sometimes, barely take into account the specific organizational context. This may be one of the reasons why workplace interventions are often not as successful as intended. This raises two specific questions: (1) what organization-specific factors should be taken into account when developing or implementing interventions? (2) how can these factors be systematically taken into account?

The present study employed a Delphi procedure to identify relevant organization-specific factors for interventions in companies. Experts working in public health, occupational safety and health, workplace health, health policy makers and in organizational development and management participated in the Delphi study.

The identified factors will be presented and can be embedded into an existing practical methodology for developing and implementing interventions (Intervention Mapping). A systematic use of these factors, called 'Organizational Mapping' facilitates adjustment to the organizational context, and is likely to contribute to better interventions with more sustainable results.

Downsizing or Expanding – Does the Type of Organizational Restructuring Play a Role in Work Engagement and Job Boredom?

Krista Pahkin, Jari Hakanen

Finnish Institute of Occupational Health, Helsinki, Finland

According to the European Restructuring Monitor (ERM), Europe has seen over 16,600 large-scale restructuring cases since 2002, and the number is growing at a rate of approximately 20–30 new entries a week. Restructuring is thus a common feature in modern work life. Much is known about the effects of restructuring on employees' health and well-being. However, research is sparse on the consequences of restructuring for employees' motivational well-being outcomes, such as work engagement and job boredom.

The circumplex model of wellbeing (Russell & Carroll, 1999) claims that two affective dimensions underlie psychological well-being: pleasure and energy. Work engagement is characterised by high activation and pleasure, whereas boredom is a state of low arousal and dissatisfaction.

The aim of the present study was to determine how the type of restructuring, i.e. expansion or downsizing of operations, relates to work engagement and job boredom. Specifically the research aimed to explore whether employees working in organizations that expand their operations experience more work engagement and less job boredom than employees working in organizations that are downsizing their operations?

The data is based on a project called the Spiral of inspiration, in which 87 Finnish organizations participated in 2011 (n= 11,468). The aim of the project was to identify key job resources in these organizations. For this study, the organizations were classified into two groups on the basis of the type of the restructuring that had taken place during the 12 months before the data collection (2011). In group 1, the sphere of operations expanded (e.g. an increase in personnel, n=5,760, 39 organizations), and in group 2, the sphere of operations downsized (e.g. a decrease in production, n= 1,093, 10 organizations). Work engagement was measured using the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002) and job boredom was measured by using the Dutch Boredom Scale (DUBS; Reijseger et al, 2013).

The preliminary findings (t-test) indicated that the level of work engagement was higher and job boredom was lower among employees working in organizations that expanded their operations, as compared to those working in downsizing organizations. Further analysis will be carried out and the findings will be discussed.

Daily Self-Management and Employee Engagement

Kimberley Breevaart¹, Arnold Bakker^{1,2}, Evangelia Demerouti³

¹*Erasmus University Rotterdam, The Netherlands*

²*Lingnan University, Hong Kong*

³*Eindhoven University of Technology, The Netherlands*

The present study adopts a bottom-up approach to work engagement by examining how self-management is related to employees' work engagement on a daily basis. Specifically, we hypothesized that employees have more resources on days that they use more self-management strategies and in turn, are more vigorous, dedicated, and absorbed (i.e. engaged) on these days. We tested these hypotheses in a sample of 72 maternity nurses who filled out an online diary for 5 days (N = 360 data points). In line with our expectations, results of multilevel structural equation modeling analyses showed that daily self-management was positively related to the resourcefulness of the daily work environment (i.e. more skill variety, feedback, and developmental opportunities) and consequently, to employees' daily work engagement. However, contrary to our expectations, the measurement model showed that two of the five included self-management strategies did not accurately reflect self-management on a daily basis. Our findings contribute to our understanding of employees' role in regulating their own daily work engagement.

A follow up study on the whole INAIL methodology to assess and manage work-related stress

Cristina Di Tecco, Tiziana Castaldi, Sara Vitali, Matteo Ronchetti, Simone Russo, Antonio Valenti, Sergio Iavicoli
INAIL Research Area, Rome, Italy

Objectives: The international debate on methodologies to assess and manage work-related stress as well as research on evaluating organizational level interventions to manage stress in general have rapidly increased over the last decades. This study aims to contribute to investigating the effectiveness and the validity of the whole INAIL (Italian Workers' Compensation Authority) methodology for assessing and managing work-related stress, through an in depth evaluation on how companies used it and what have been their findings.

Methods: A follow-up of companies using the whole method has been conducted by means of a questionnaire (22 questions) aiming to collect information about the usability and effectiveness of the INAIL methodology, its related tools and the subsequent interventions implemented by companies. Out of 331 companies involved, 124 questionnaires were filled-in (response rate 37.5%). A combination of information gathered from the follow-up and findings of the assessment of work-related stress carried out by companies by the means of INAIL tools (namely a preliminary checklist and the Italian version of the HSE Indicator Tool) were analysed through a set of mixed effects and regressions models.

Results: The INAIL methodology has been considered a quite useful instrument to manage work-related stress by over the 80% of the sample (39% said enough, 40% very, and 10% completely useful). Forty-three percent of companies implemented corrective measures and organizational interventions to manage stress after the assessment phases and on the basis of their findings. Only 3 companies reported adopting the HSE Indicator Tool after a lack of efficacy of interventions/corrective measures adopted to address negative findings from the preliminary assessment (as required by law). Eighty-four companies voluntarily carried out the in-depth assessment to explore employees' perceptions and 54 companies conducted deeper investigation of the findings emerging from the preliminary assessment.

Conclusions: The follow-up provided essential information about companies' satisfaction, methodology effectiveness, and web platform usability. It represents a crucial opportunity to continuously improve the methodology that should be implemented in the future. Our findings also contribute to the monitoring phase of the state of the art of work-related stress assessment and management in Italian companies, currently implemented at national level.

Evaluating the psychometric properties of two tools for measuring work-related stress risk

Matteo Ronchetti¹, Benedetta Persechino¹, Antonia Ballottin², Cristina Di Tecco¹, Simone Russo¹, Tiziana Castaldi¹, Sergio Iavicoli¹
¹*Inail Research Area, Rome, Italy*, ²*Veneto Region, Verona, Italy*

Objectives: According to the Italian regulatory framework for health and safety in the workplace, the methodology for the assessment of work related-stress developed by INAIL (Italian Workers' Compensation Authority) was divided into a preliminary assessment (using a checklist for measuring objective risk indicators of work-related stress namely sentinel events, work content factors, work context factors) and an in-depth assessment (using the Italian version of HSE Management Standards Indicators Tool). This study aimed to assess the psychometric properties, such as reliability, convergent/discriminant validity and discrepancy between findings of the both checklist and questionnaire.

Methods: The sample is composed by 294 groups of workers considered at risk for work-related stress from 137 companies. A checklist was compiled for each group and

questionnaires were filled-in by all workers involved (n. questionnaires completed= over 4,000) Data were analysed to assess reliability and convergent/discriminant validity as well as significant differences in findings.

Results: Findings confirmed the reliability and convergent validity of the two instruments. Correlations were all significant at the .01 level as been expected between such closely related tools. Furthermore, results from a one-way ANOVA between three levels of risk (low, medium, high) and the six factors of the HSE Indicator Tool (demands, control, support, role, relationships, change) showed that the higher the risk in the preliminary assessment the higher the risk in employees perceptions (P-value<0.05). Finally, the discrepancy analysis of findings showed that the 83% of the sample (246 groups of workers) had correlated results emerging from both the checklist and questionnaires.

Conclusions: The INAIL methodology provides scientifically validated instruments to help organizations assess and manage work-related stress, in compliance with national regulations. Analysis on psychometric properties of both the check-list for preliminary assessment and the HSE Indicator Tool for further in-depth assessment confirmed the robustness of the methodology, while opening several avenues to improve both the INAIL methodology itself as well as national guidelines for the assessment and management of work-related stress risk.

Perceptions of work-related stress risk: the integrated role of socio-demographic and occupational variables

Alessandro Marinaccio, Pierpaolo Ferrante, Marisa Corfiati, Cristina Di Tecco, Bruna Maria Rondinone, Michela Bonafede, Matteo Ronchetti, Benedetta Persechino, Sergio Iavicoli
Inail Research Area, Rome, Italy

Objectives: Work-related stress has a detrimental impact on workers' health and safety and organizations' productivity. The assessment, prevention and control of work-related stress risk are widely recognized as one of the major challenges to occupational health and safety and increasing importance is being attached to socio-demographic and occupational variables. In light of the literature, the aim of this study is to explore the integrated role of socio-demographic and occupational variables in employees perceptions of work-related stress.

Methods: The study includes 75 organizations in the public (27%) and private (73%) sectors. Out of the 8,527 questionnaires administered to workers, 6,378 were returned (74.8% of total). The Italian version of the Health and Safety Executive Management Standards Indicator Tool was used in this study to examine the main and interaction effects of workers socio-demographic and occupational variables on the seven Indicator Tool risk factors for work-related stress. A set of mixed effects models are adopted to test single and combined effects of the variables.

Results: Women workers present significantly lower scores on control and peer support scales and have more negative perceptions of relationships and change at work than men. The oldest group (>50 years) shows a higher score for control than those younger than 30 years. Both married and divorced/widowed people experience job demands more negatively than unmarried workers, though unmarried responders have worse scores for control and role. Age, job seniority, and educational level appear positively correlated with control at work, but negatively with job demands. Fixed-term contract workers have more positive perceptions of demands and relationships than permanent workers but experience more role ambiguity. A commuting time longer than one hour and shift work also appear to be associated with higher levels of risk for work related stress (except for role).

Conclusions: The findings suggest that the assessment and management of work-related stress risk should consider specific socio-demographic and occupational risk factors such as gender, age, educational level, job status, shift work, commuting time, and job contracts.

Analysis of these variables is particularly important in the light of European legislation on safety and health at work, because it can provide useful information as a basis for identifying specific groups of workers at risk.

Early Maladaptive Schemas and Work-family Conflict: A Moderated Mediation of the Relationship between Occupational Role Stressors and Emotional Exhaustion in Spanish Salespeople

Gema Ruiz de Huydobro, Leire Gartzia

¹*University of Deusto, Bilbao, Spain*, ²*University of Deusto (Deusto Business School), Bilbao, Spain*

Given the relevance of the detrimental effect of occupational role stress on the workers' welfare, the understanding of not only the situational variables but also individual factors which are involved in this phenomenon has become a must in order to tackle its negative consequences. To respond to this need, the mediating role of work-family conflict between role stressors (role overload, role conflict, and role ambiguity) and emotional exhaustion was tested from the perspective of the Conservation of Resources Theory (Hobfoll, 1989; Hobfoll, 2002). In addition, the moderating influence of early maladaptive schemas (EMS), namely individual predispositions on certain thinking and information processing styles that leads people to suffer from distress when they have to face stressful events, derived from Schema Therapy Model (Young, Klosko, & Weishaar, 2003), was also tested on the hypothesized mediation.

A sample of Spanish salespeople (N=741) was administered the Role Ambiguity, Role Overload and Role Conflict Scale (Abdel-Halim, 1978), the emotional exhaustion scale of the Maslach Burn-out Inventory General Survey (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996), the Young Schema Questionnaire-3 (Young and Brown, 2006), and a multidimensional measure of work-family conflict (Carlson, Kacmar, & Williams, 2000).

The Work-family conflict was found to partially mediate the relationship between role overload and role conflict with emotional exhaustion. Moreover, mistrust, unrelenting standards, and self-sacrifice EMS, were found to moderate this mediation, such that the higher EMS workers had, the more intense the effect of work-family conflict on emotional exhaustion. These results not only suggest that the conflict between the personal and professional lives of salespeople are detrimental to the way in which work experiences affect psychological strain at the workplace, but also demonstrate that their cognitive vulnerabilities can enhance this effect. The implications of these findings in the hazard prevention and intervention policies are discussed.

Audit of psychosocial risk management system: Between tacit knowledge and standardization

Anne Jespersen^{1,2}, Peter Hasle¹, Pernille Hohnen³, Christian Uhrenholdt Madsen²

¹*Aalborg University, Copenhagen, Denmark*, ²*Bureau Veritas, Copenhagen, Denmark*

³*Aalborg University, Aalborg*

Psychosocial risks are now widely recognized as major challenges for the working environment. The OHSAS 18001 standard for occupational health and safety management system (OHSMS) provides a framework for organizations on how to manage these risks. Internal and external audits of compliance with the OHSMS are key elements in the standard. Audit is defined as a documented process for obtaining evidence and evaluating it objectively to determine the extent to which the OHSMS criteria are fulfilled. According to the OHSAS standard auditors should be competent to carry out the task and be familiar with risks of the areas they are auditing. However, the standard provides little concrete information about what kinds of competences that are needed for audits in the psychosocial working environment.

The aim of the present paper is to understand what kind of competences for audits of the psychosocial working environment are developed in organizations with a certified OHSAS 1801 management system. Audit and competence are understood as social constructions and we analyzed how the standard – approaching organizations as rational instruments and the auditor as a kind of general expert – have constitutive effects on competences. The empirical data is based on case studies in two Danish municipalities, and data collection includes observations of internal audits and interviews with internal auditors and employees responsible for maintaining systems. The empirical data suggest that internal auditors have a varied background and that their knowledge about psychosocial risks is limited to the more direct “visible” risks such as violence and harassment. They have difficulties in carrying out audits and the results are mainly influenced by personal preferences and less by the systematics of the OHSMS.

Factors driving organizational level intervention in managing the psychosocial work environment: Implications for policy and practice

Nicholas Andreou^{1,2}, Stavroula Leka¹, Aditya Jain²

¹Centre for Organizational Health and Development, University of Nottingham, Nottingham, UK, ²Nottingham University Business School, Nottingham, UK

There is a recognised need to improve the management of psychosocial working conditions in organizations. Many studies have suggested these factors can have a negative impact on worker and societal health (Leka and Jain, 2010) but also on worker creativity and organizational innovation (Arundel et al., 2007) and finally productivity (HSE, 2006). Despite this, recent surveys illustrate that organizations could do more to intervene. The Enterprise Survey on New and Emerging Risks (ESENER) estimates that between 23 and 58% of organizations implement psychosocial interventions, depending on the intervention considered (EU-OSHA, 2010). Primary intervention (prevention) is often underutilised in approaches (HSE, 2003) despite a range of theoretical arguments and empirical evidence to suggest it is a necessary component of effective intervention. The present study takes an organizational change perspective (Senior and Swailes, 2010) and considers what factors are associated with increased likelihood of primary level intervention.

In particular six factors, grouped under three themes, are considered based on the literature. Political: legislation and pressure from labour inspectorate. Competitiveness: concerns about productivity or quality of work and high absenteeism. Social (stakeholder engagement): pressure from employees or representatives and requirements from clients or concern about company reputation. The impact of these on the likelihood of primary level intervention in the psychosocial work environment was assessed using the ESENER survey. Binary logistic regression was used given the dichotomous nature of the dependant variable (presence or absence of primary intervention).

Given the role and envisaged function of political pressures (Amodu, 2008; Brammer et al., 2012), it was expected that these would be amongst the strongest drivers. Similarly, given organizational objectives largely include competitiveness, it was expected that these drivers would also be strong significant predictors. Finally, it was expected, that social drivers might be the weakest (although still significant) drivers due to the relatively low awareness of psychosocial issues in relation to other stakeholder priorities for organizations.

Results indicated that as a group social drivers were the strongest predictors (OR: 1.84 and 1.48 respectively, $p < 0.001$), followed by competitiveness pressures (OR: 1.53 and 1.22 respectively, $p < 0.001$), and political pressures were the weakest (yet significant) predictors (OR: 1.11, $p < 0.001$, and OR: .971, $p > 0.05$). Thus, hypotheses that these factors would be significant predictors were mostly supported; however the relative strength of the predictors was contrary to expectations. Implications for policy makers and practitioners will be explored during the presentation.

Work Environment, Health Promotion and Well Being. The Role of Positive Occupational Health Psychology

Maria João Cunha^{1,2}, João Paulo Pereira^{1,2}, Santiago Gascón³

¹*Instituto Superior da Maia, Maia, Portugal*, ²*Associação Portuguesa de Psicologia da Saúde Ocupacional, Lisboa, Portugal*, ³*Universidad Zaragoza, Zaragoza, Spain*

The study of health and disease is an area that links theories and interventions related to several areas of psychology. The application of these areas to the workplace has developed specific approaches regarding health and occupational health psychology, which this article is based on. Within the theoretical body, conceptual frameworks related to different domains of life and individuals working life are contextualized. Aiming at the promotion of health and wellness, the article presents the creation of a program regarding evaluation and intervention of psychosocial risks, based on health coaching, arising from the statistical analysis of a Portuguese sample with 899 participants.

Results showed a predictive effect of workflow in the decreased perception of health and well-being. On the contrary, the analysis of positive work variables concluded the existence of predictive relations between engagement, commitment, empowerment, health, well-being, satisfaction, quality of life and work.

The Role of Emotion Regulation in the Crossover Process

Angela Neff¹, Sabine Sonntag², Cornelia Niessen³, Dana Unger²

¹*LMU Munich, Munich, Germany*, ²*University of Mannheim, Mannheim, Germany*, ³*Friedrich-Alexander University of Erlangen-Nürnberg, Erlangen, Germany*

According to emotion regulation theory (Gross & John, 2003), two different strategies of emotion regulation can be distinguished. The reappraisal strategy is antecedent-focused and refers to a reinterpretation of situations in order to reduce negative, and to enforce positive, affect. By contrast, the suppression of positive and negative emotions constitutes a response-focused emotion regulation strategy. Research has shown that a reappraising regulation style as opposed to emotion suppression is beneficial in terms of improved affect, satisfaction, and interpersonal relationships bringing along important health implications for individuals' working and private lives (Gross & John, 2003; Nezlek & Kuppens, 2008). In our study, we wanted to shed more light on possible positive consequences of emotion regulation by examining the role of employees' emotion regulation for their partners' experiences of positive affect within dual-earner relationships.

According to crossover research (Westman, 2001), a person's affective experiences can be transmitted (i.e. can cross over) to his or her romantic partner. Therefore, we hypothesized that favorable emotion regulation strategies should not only be beneficial for a person him- or herself but also for his or her partner. More specifically, we proposed that employees with a reappraising emotion regulation style as well as with low emotion suppression should experience more positive affect that should in turn crossover to their partners who also work. Thus, we hypothesized an indirect effect of one partner's emotion regulation strategies on the other partner's positive affect through the crossover positive affect.

Because measures within couples are non-independent, we tested our hypotheses applying multilevel hierarchical linear modeling among 102 dual-earner couples (N = 204 employees) applying the Actor-Partner Interdependence Model (Kenny, Kashy, & Cook, 2006).

In line with previous results (Gross & John, 2003; Nezlek & Kuppens, 2008), we found that using a reappraising emotion regulation style as well as showing low emotion suppression positively predicted a person's positive affect. Going beyond this intraindividual association, we found a positive indirect effect of a person's use of both emotion regulation strategies on

his or her partner's positive affect (even after controlling for this partner's own respective emotion regulation strategies). Our results emphasize the positive role of favorable emotion regulation strategies within dual-earner relationships expanding research on emotion regulation in the work context.

Can Job Crafting Increase Employee Work–Life Balance and Well-Being

Verena C. Hahn¹, Anna-Laura Schmitz²

¹*University of Mainz, Mainz, Germany*, ²*University of Muenster, Muenster, Germany*

This longitudinal study examined if employees could improve their work–life balance and well-being by crafting their jobs. Job crafting refers to self-initiated change behaviors that employees engage in to align their jobs with their own preferences. Previous research has shown that job crafting is associated with improved work-related outcomes such as increased work engagement and job satisfaction. We propose that job crafting should not only influence employees' work-related outcomes, but should also have an impact on their life outside work. We expect that job crafting strategies should help employees to juggle job and home demands resulting in increased work–life balance and better well-being at home. In line with research by Tims and colleagues (2012, 2013) we focused on the job crafting strategies of reducing hindering job demands, increasing structural job resources, and increasing social job resources.

Data was collected via web-based surveys at two time points with a time lag of two weeks. Participants were 134 employees from diverse occupations. We performed hierarchical regression analyses controlling for work–life balance and well-being at Time 1 to predict changes in work–life balance and well-being at Time 2. Results showed that the job crafting strategies of reducing hindering demands and increasing structural resources predicted changes in employees' well-being at home, but not in their work–life balance. Moreover, the job crafting strategies of reducing hindering demands and increasing structural resources buffered the detrimental effect of high time pressure on employees' work–life balance.

Taken together, our findings underline that job crafting does not only help employees to improve work-related outcomes, but also represents an effective strategy for employees to improve their work–life balance and their well-being at home.

Error Management in Health Organizations: How High Reliability Organizations may Implement Organizational Performance Adopting a Generating View of Errors

Maria Luisa Farnese

Sapienza, University of Rome, Rome, Italy

The recent construct of Error Culture (van Dyck, Frese, Baer & Sonnentag, 2005) suggests that organizations that have an effective approach to errors are more apt to learn from errors and to risk and experiment. So, in the long run, they are more likely to improve their performance and to innovate. In fact, errors may be conceived not only as adverse events, because of the negative consequences they can result in (e.g. loss of quality, accidents), but also as a form of negative feedback. As such, they provide valuable information to develop the resilience of the system, to reduce new errors in future, and to foster organizational learning (Hofmann & Frese, 2011). This is more relevant in High Reliability Organizations (Weick & Sutcliffe, 2007): because of high internal uncertainty and job complexity (Morgeson & Humphrey, 2006), they have both a higher probability experience errors, and suffer from greater negative disruptive error consequences (Pronovost et al, 2006).

However, this theoretical framework has little empirical evidence (e.g. Harteis et al, 2008; Cigularov et al, 2010) and, to the best of our knowledge, none in the sanitary context.

This contribution aims to verify the influence of error management culture on organizational performance, both as an enabling factor of the organizational growth (goal achievement, innovation), as proved by authors (van Dyck et al, 2005) and as a protective factor (reduction of effective errors and of turnover intent), as suggested by literature.

Our study examines the relation between organizational performance, error culture management and job complexity perception in the Health context.

Data from 477 health workers of 20 health units from different Italian hospitals were analysed using regression analyses. Results show that perception of job complexity (various, specialized and high-level skills) positively affects error management culture that, in turn, influences organizational performance (respectively, it has a positive influence on goal achievement, innovativeness and collective efficacy, and a negative influence on turnover intent and effective errors). When cultures are high in error management, promoting an active learning process, organizations reduce the errors made and better their performance. In addition, the mediational role of error culture management in the relation between job complexity and organizational performance confirms the relevance of this construct for High Reliability Organizations, such as health contexts.

Employee Resilience and Work-Related Factors: Scale Development and Some Interesting Associations

Katharina Naswall, Joana Kuntz, Sanna Malinen

University of Canterbury, Christchurch, New Zealand

To date, the resilience literature mainly focuses on the clinical notion of coping with challenging life circumstances, and views the construct as primarily dispositional. However, recent research has proposed a departure from the trait-like approach, suggesting that resilience can be cultivated, and that successful adaptation to adversity or change is symptomatic of its developable nature. Despite the likely connections to positive responses in changing environments, the investigation of resilience in the workplace is largely limited to an organization-level assessment, or to the trait-based approach, without looking at the aspects of resilience among employees which can be facilitated by the organization. Also, research to date has yet to investigate the association between employee resilience and important work-related outcomes.

The present study aims to introduce a measure of employee resilience, developed to assess the interplay between employee and the organization in facilitating proactive and adaptive behaviors during organizational change. The study also aims to investigate the relationship between employee resilience and organizational factors, such as organizational support and participation as predictors of employee resilience, and work-related attitudes as outcomes of resilience.

The data was collected in a New Zealand professional organization. The context includes both internal (changes to workload and performance management) and external challenges (economic turbulence and the parts of the country recovering from natural disaster). The preliminary results indicate that the newly developed measure of employee resilience indeed captures something that is not a trait or a coping strategy. Results of regression analyses indicate that employee resilience is related to important work-related attitudes such as higher job satisfaction and engagement, and lower turnover intention. Even though the results of the present study are preliminary in that the research questions are only tested in a cross-sectional sample and thus cannot allow for causal inferences, they are promising by their indicating that employee resilience can be affected by organizational factors such as support and participation, and that it relates to positive outcomes which benefit both the employee and the organization.

An Experimental Investigation of the Job Demand-Control Model with Measures of Salivary Alpha Amylase and Continuously Recorded Heart Rate Variability.

Bradley Wright, Emma O'Donnell, Kathleen Landolt
La Trobe University, Bundoora, VIC, Australia

Introduction: The job demand-control model (JDC) has been the subject of hundreds of naturalistic investigations and produced inconsistent findings in its ability to predict ill-health. However, only a handful of experimental studies have been used to manipulate and assess the constructs in question. Our aim was to study the associations between objective and subjective measures of stress and ill-health.

Method: Female participants (N= 60) were recruited and completed questionnaires that assessed life stress, work locus of control (WLOC), optimism and perceptions of task effort and autonomy. Participants provided saliva samples to assess alpha amylase (sAA) at baseline and after the Standard (S) (12 min.) and Autonomy (A) (12 min.) conditions where participants were required to alphabetise a jumbled list of 40 references and scores were collated (task efficacy). Participants received A\$5 for completing 80% of the S and A task and in the S task were forced to take a 90 sec. break 90 sec. into the task whereas in the A task, participants chose when to take their 90 sec. break. Heart rate was monitored continuously using a Polar® chest strap and paired heart monitor. Heart rate (HR) and heart rate variability (RR, RMSSD & Pnn50) means were recorded for the duration of each of the tasks.

Results: The manipulation of autonomy was significant in increasing perceptions of autonomy ($p < .05$) however, commensurate with increased stress responses, sAA, HR, and RMSSD scores increased ($p < .001$), while RR ($p < .01$) and task performance decreased ($p < .05$). Five hierarchical regressions were used to assess if demand and autonomy difference scores (Step 4) were related with each of the 5 physiological indices after controlling for confounders (Step1: Age, hours awake chronic life stress), disposition (Step 2: WLOC, optimism), and task efficacy (Step 4) with RR and HR producing the only significant Step 3 models with decreased task efficacy related with increased HR ($p < .05$) and decreased RR ($p < .05$).

Discussion: Our findings largely indicate significant associations between objective, but not subjective reports of stress when examining the JDC model. Increased autonomy was not expected to increase stress but others have reported similar findings in acute novel stress studies and this is at odds with the posited moderating effect of autonomy in the JDC.

Identifying Objective Work Activities and Work Contexts Associated with Workplace Bullying

Michelle Tuckey, Sarven McLinton, Peter Chen, Maureen Dollard, Yiqiong Li, Annabelle Neall
University of South Australia, South Australia, Australia

The work environment hypothesis has generated much research interest in terms of how job characteristics and work environment factors may enable bullying to occur in workplaces. In this study we contribute to this body of literature by examining the relationship of objective work activities and work context factors with reports of exposure to workplace bullying on the basis of two national databases.

Data from two national databases were merged for the analysis. Work activities (i.e., general types of job behaviours) and work context (i.e., physical and social factors that influence the nature of work) ratings, made by independent job analysts, were obtained from the US Occupational Information Network (O*NET). Perceptions of exposure to workplace bullying were reported by workers in the Australian Workplace Barometer project. The two datasets were linked via Standard Occupational Classification codes, giving 3829 employees in 209 different occupations.

Multilevel modelling in MPlus showed that administrative activities represented a risk factor for bullying exposure, especially obtaining, documenting, evaluating, and communicating information. Likewise, irregular work schedules and high consequences for error were also associated with increased exposure to bullying. In contrast, working in physically demanding conditions (e.g., outdoors, indoors in uncontrolled environments, and in vehicles) was associated with reduced exposure to bullying.

The results suggest that certain work activities and contexts as well as social and physical work contextual factors that are common across different occupations can be risk factors for workplace bullying. The factors that function as risk factors could be audited and redesigned by organizations, and addressed through a risk management process.

Energy Management during the Workday, Work Engagement and Performance

Liljaana Lähteenkorva, Jessica de Bloom, Ulla Kinnunen, Kalevi Korpela
University of Tampere, Finland / Tampere, Finland

Little is known on how employees sustain their mental and physical energy during a work day. It is also unclear how different strategies to maintain energy levels relate to well-being and performance at work. We investigated the type of strategies employees use in order to maintain energy at work and how frequently they apply them. Moreover, we linked these strategies to work engagement and performance.

The study was conducted among 1,209 Finnish employees from diverse occupational sectors, such as education, IT, media and healthcare. Of the employees, 61% were woman and the average age was 47.5 years. The majority of the employees (66%) had a bachelor's degree or higher.

We examined 13 different behaviors employees can possibly engage in to maintain their energy at work. Examples are "make a to-do list" or "listen to music" ($\alpha=.73$). We measured employees' level of work engagement with the subscales of vigor ($\alpha=.89$) and dedication ($\alpha=.93$). Work performance was assessed by measuring task performance ($\alpha=.65$), contextual performance ($\alpha=.62$) and creativity ($\alpha=.83$).

In general, the employees applied a wide range of strategies to manage their energy at work: on average about 10 out of 13 possible strategies. The most frequently used strategies were "having a snack or drinking coffee, tea or energy drinks" and "communicating with someone about non-work-related things". Strategies rarely reported were "performing relaxation exercises" and "going outside for fresh air".

The strategies that had the strongest relations with both work engagement and performance were "focusing on what gives joy at work", "setting a new work-related goal" and "offering help to someone at work". Of the 13 strategies measured, "surfing the web for non-work-related information" was the only strategy that was not related to any of the positive work outcomes. Furthermore, it was shown that the more often (possible range: never to always) employees deliberately applied strategies for energy management at work, and the greater the range of different strategies, the higher both their engagement and performance at work.

Altogether it seems that the strategies with relationships to positive work outcomes relate to focusing on positive aspects of work, setting new goals and demonstrating proactive social behavior in the work community, whereas strategies with weak or no relationships to work engagement and performance were activities performed alone without exerting much effort. Further analysis will examine group differences in the use of energy management strategies.

The Interactive Effects of Work Control and Self-Determination on Coping, Psychological Distress, Intrinsic Motivation, and Meaningful Life

Stacey Parker, Nerina Jimmieson

The University of Queensland, Brisbane, Queensland, Australia

The positive main effects of work control are well-documented; however, evidence for the stress-buffering effects of work control is mixed. Motivation is one personal resource (or vulnerability) that might determine whether work control is useful for stress reduction. Self-determination theory (SDT) provides a multidimensional perspective on motivation, considering both the intensity and type of motivation (i.e. autonomous and controlled types). More autonomous individuals may be more willing or able to use work control opportunities available in the environment as a resource for stress reduction. In contrast, individuals who are more controlled in their motivation may find high work control environments stress-exacerbating. As such, the purpose of the present study was to examine the moderating effects of individuals' global motivation (i.e. autonomous and controlled types) within the context of the Demand-Control Model of occupational stress.

Employees (Time 2 $N = 354$; 47.6% female; Age, $M = 32.60$, $sd = 10.31$; Tenure, $M = 4.12$, $sd = 4.73$) recruited via Mechanical Turk completed two surveys one month apart. At Time 1 predictors were measured, including work demands, work control, and global motivation (i.e., autonomous and controlled types). At Time 2 the dependent variables were measured and included coping strategies, as well as psychological distress, intrinsic motivation towards work, and meaningful life. Hierarchical moderated regression analyses revealed, in line with person-environment fit theory, for individuals higher in autonomous motivation, as work demands increased, higher work control prompted more adaptive coping in the forms of problem-focused coping and positive reappraisal. Conversely, for those higher in controlled motivation, higher work demands increased problem minimisation only when control was low. In addition, for those lower in controlled motivation, higher work demands increased seeking of instrumental social support only when control was high. Interestingly, joint moderating effects of the two types of motivation emerged on the effects of work control. High work control increased psychological distress when autonomous motivation was low and controlled motivation was high, decreased meaningful life when autonomous motivation was low and controlled motivation was high, and increased intrinsic motivation towards work when autonomous motivation was high and controlled motivation was low.

These findings suggest individuals' motivations are moderators of the main effects of work control, but also of the utility of work control as a tool for stress reduction. Future research and practical implications will be discussed.

The Relationship between Dispositional Resistance to Change and Emotional Exhaustion: Effects of Transformational Leadership from a Team-Level Perspective

Sarah Turgut, Alexandra Michel, Karlheinz Sonntag

Heidelberg University, Heidelberg, Germany

Organizations need to constantly change in order to stay competitive and secure their survival. Organizational change is a challenge for organizations as well as employees and may result in negative health-related outcomes. Research has shown that employees tend to resist changes. However, people differ concerning their inclination to resist changes. Thus, it is important to analyse if employees who have a pronounced disposition to resistant changes experience more negative health consequences such as emotional exhaustion in times of change. Building on the person-environment fit theory (French, Caplan, & Harrison, 1982) and conservation of resources theory (Hobfoll, 1998), we assume that dispositional resistance to change is positively related to emotional exhaustion.

Furthermore, research has shown that contextual factors are highly relevant in explaining change recipient's reactions. As employees working in teams exchange their thoughts and feelings about work-related issues such as on-going or anticipated changes, work teams create a consensual view of organizational change. Thus, their shared perception of their work environment is a key factor of understanding employee reactions towards change. One of the common factors that teams share is their supervisor. Although team members may differ in their individual perception of leadership behaviour, a shared view of the leadership strengths and weaknesses is likely to exist. Transformational leadership comprises leadership behaviours such as idealized influence, individualized consideration, inspirational motivation and intellectual stimulation. This leadership style has been shown to have a positive impact on employee's performance and well-being. As transformational leaders were shown to be effective in situations involving uncertainty, this leadership style is expected to be particularly beneficial in times of change. In line with conservation of resources theory, transformational leadership can be understood as a resource. Hence, we postulate that transformational leadership buffers the positive relation between dispositional resistance to change and emotional exhaustion.

To test the hypotheses, we conducted a longitudinal team-level study (N = 701 in 28 teams) including two waves of data collection in cooperation with an internationally operating German company of the automobile industry. Multilevel analyses revealed that dispositional resistance to change is positively related to emotional exhaustion (time 2) over and above the impact of emotional exhaustion (time 1). Moreover, transformational leadership was found to significantly moderate this relationship.

The present study sheds light on the influence of personal characteristics on change consequences such as health. Furthermore, the role of leadership behaviour is highlighted which offers theoretical as well as practical implications.

Acceptance of Smartphone-Based Applications (apps) in Occupational Health Projects: The View of German and Austrian Leaders

Anita Dunkl, Paul Jiménez

University of Graz, Graz, Austria

The aim of this explorative study was to investigate the acceptance of using smartphone-based applications (apps) in occupational health projects. An online-study was performed in June 2013, where 438 leaders were asked about their opinion of using apps in occupational health projects. As leaders are responsible decision-makers in the organization and serve as key figures in occupational health project, it seemed reasonable to ask only leaders about their opinion. 31% of the participants worked in the management of the organization, the rest inherited other leading positions. 64% of the leaders worked in Germany, 36% worked in Austria. 71% of the participants were male, 29% were female. Most of them (17%) worked in the service sector, followed by industry (12%) and commerce (12%).

The results show that 33% of the leaders would like to use an app in occupational health projects. 46% even stated that these apps can measure health-relevant aspects more efficiently. Critical concerns about apps were expressed from 39% of all participants. Leaders who have a more positive attitude towards occupational health in general are more likely to try out apps in occupational health ($\beta = .21, p < .01$). Furthermore, leaders who are working in an organization with less than 50 employees see the possibility of using apps in occupational health as more positive ($F_{3,368} = 1,867; p < .05$). 58% of leaders working in a smaller organization stated that apps could be able to efficiently measure health-relevant aspects. No differences regarding gender, hierarchical position, leading experience or number of direct subordinates were found in this study.

Asking about the main advantages of using apps in occupational health projects, the leaders mentioned the possibility of getting instant individual feedback and advice. Most of the leaders are interested in getting feedback about their own burnout-risk (73%) and stress-management (73%). The possibility for sharing one's health-related aspects on social platforms receives less interest.

The results show that about a third of German and Austrian leaders could imagine using apps in occupational health projects. Furthermore, apps in occupational health are seen as more positive if the leaders have a more positive attitude towards occupational health in general and work in smaller organizations. To our knowledge, this is the first study that analyzes the acceptance of using apps in occupational health projects. Future studies should include the view of other occupational health experts as well as employees without a leading position. In addition, qualitative methods could also be useful in exploring further advantages and disadvantages of this innovative approach.

Gender Differences in Career Prospects – Does Work-Family Conflict Matter for Perceived Employability and Career Opportunities?

Erik Berntson¹, Katharina Näswall²

¹*Department of Psychology, Stockholm University, Stockholm, Sweden,* ²*Department of Psychology, University of Canterbury, Christchurch, New Zealand*

Gender equality in the labourmarket has been emphasized as an important factor several times in European community (EU Commission, 1997; 2010). Nevertheless, differences in career opportunities have been found in previous research, indicating that women report more barriers than men regarding career aspects (Hawley McWirth, 1997). In this respect, a number of possible explanations has been put forward, for example work-family conflict (WFC) (Gali Cinnamon, 2006). In the present study we are interested in investigating possible predictors of career opportunities and more specifically the aim of the present study is to investigate antecedents of career opportunities and perceived employability.

The present study comprised a representative sample of 1,609 Swedish workers (716 men and 883 women) in the ages of 26 to 51, who answered two questionnaires, one in 2005 and one in 2006. The study comprised questions regarding career opportunities and perceived employability (outcomes) and age, mental well-being, education, tenure, children at home, working hours (per week) and WFC (predictors). The data was analyzed by means of a regression analysis.

Preliminary results indicate that women reported lower levels of employability as well as career opportunities. They also had a higher level of education, shorter tenure and worked fewer hours per week. Regarding the regression analysis, the results displayed a significant association between WFC and the outcomes for men but not for women. For women part-time work predicted both outcomes. It could also be found that tenure had a negative effect on both outcomes, suggesting that for both men and women (although somewhat stronger for men) working longer in one organization affects perceived career prospects in a negative way. In addition, the results indicate that subjective mental well-being is an important predictor for employability as well as for career opportunities.

The results confirm earlier studies in that women report more career barriers. We also find it interesting that the results from the preliminary analyses suggest that WFC is primarily a problem for men. For women, the number of hours per week seems to be more important.

Does Diversity in Teams Foster Innovation and Promote Employees' Health?

Stephan Hinrichs, Anja Gerlmaier, Erich Latniak
Universität Duisburg-Essen, Duisburg, Germany

As an effect of the ongoing demographic change in Germany, recent studies are forecasting an increasing skills shortage, especially in the area of technology development

(Bildungsbericht der Bundesrepublik Deutschland, 2010). The political efforts to prevent this shortage are presently focusing on the recruitment of foreign experts and on a lowering of the restrictions for immigration. Furthermore, there is a discussion on measures to raise the employment rate of women in technical professions and to increase the employment rate of elderly people in these areas. As an effect of the structural change and political efforts, this will lead to a rising of staff diversity in development teams, and to the challenge of how to staff and organize teams to foster innovation and promote employees' health.

Based on research conducted in the ongoing project PINOWA, which is funded by the German Federal Ministry on Research and Education, we will try to answer the question whether increasing team diversity will have an impact on the teams' innovative ability, and furthermore, whether there are any effects on team members' well being. We will focus on the working conditions and the working environment of the team members and we will analyze whether these factors have a substantial effect on innovation climate and team members' health. If so, this should be taken into account when designing teams.

Empirical data stem from a questionnaire survey answered by 205 team members in three companies and 26 teams from the field of development and IT-services. First results reveal a significant impact of age and age diversity on innovation climate and health indicators. Higher age seems to be a main predictor for team members' higher strain experience and lower innovation climate values. In this respect, our data tends to confirm previous research on these factors. But there are some confusing results, as well, making the picture less clear: there are lower values of strain experience for younger team members but for other sub-groups, too. Furthermore regardless of age, we find lower values of strain experience for team members having a job-tenure of less than 3 years (compared to long time team members). Instead of social-structural factors, these results should be interpreted as being aspects of (work-) life experiences of the employees, which should be taken into account. Further results of our study will be discussed focusing on aspects of to theoretical and practical relevance.

Work-related Psychosocial Risk Factors for Long Term Sick Leave: A Prospective Study of the General Working Population in Norway

*Cecilie Aagestad, Håkon Johanessen, Tore Tynes, Hans Magne Gravseth, Tom Sterud
National Institute of Occupational Health, Oslo, Norway*

Objectives: This study examines the impact of several work-related psychosocial exposures on long-term sick leave in the general working population.

Methods: From a randomly drawn population sample of Norwegian residents interviewed about working conditions in 2009 (N= 12,255, response rate 60,9%), respondents working at least 100 days in 2009 and 2010 (n=6,758), were followed in a national registry for subsequent sickness absence during 2010. The outcome of interest was medically confirmed LTSL ≥ 40 working days during 2010 and eight work-related psychosocial factors were evaluated

Results: In total, 635 persons (9.4 %) were classified with subsequent LTSL. The risk of LTSL was higher among women and in older workers, those with fewer years of education, employees holding elementary occupations, regular smokers, those disabled-/injured, and among persons with chronic health complaints and previous LTSL at baseline. After adjusting for these factors we found that high exposure to role conflict (OR=1.72; 95% CI 1.31-2.25), emotional demands (OR = 1.31; 95% CI 1.05-1.65), and low supportive leadership (OR = 1.61; 95% CI 1.24-2.09) predicted subsequent LTSL. A test for trend was statistically significant for all contributing factors ($P \leq .05$). The estimated population risk for these factors was approximately 18%.

Conclusion: Considering all of the evaluated work-related factors, role conflict, emotional demands and low levels of supportive leadership contributed the most to the population at risk of LSTL.

Differential Relations between Challenge and Hindrance Stressors and Work-Related Attitudes: The Mediating Role of Work-Related Affect

Barbara Stiglbauer, Bernad Batinic

Johannes Kepler University Linz, Linz, Austria

Introduction: Stressors are often classified into those that people usually appraise as promoting personal growth (i.e. challenge stressors, such as workload or job complexity) and those that constrain personal development (i.e. hindrance stressors, such as role ambiguity or red tape). Both types of stressor show positive correlations with psychological strains, but different relationships with work-related attitudes and behaviours: whereas challenge stressors tend to go along with beneficial attitudes and behaviours, the opposite is true for hindrance-related stressors.

Purpose: The aim of the present study is to shed some more light upon the mechanisms associated with challenge and hindrance stressors. More precisely, we investigate whether the differential relationships between challenge and hindrance stressors and work-related attitudes can be explained by differences in underlying emotional processes. Besides the challenge-hindrance-stressor framework, affective events theory and Warr's model of work-related affective well-being (four distinct aspects: anxiety, comfort, depression, and enthusiasm) serve as a theoretical background.

Method: A sample of 387 employees completed an online questionnaire about challenge (time pressure) and hindrance stressors (role ambiguity, job insecurity, and illegitimate tasks), work-related affect (anxiety, comfort, depression, and enthusiasm), and attitudes (job satisfaction and organizational identification).

Results: In line with previous studies, hindrance but not challenge stressors were related negatively to work attitudes. Furthermore, hindrance stressors were associated with higher levels of anxiety and depression, and with lower levels of comfort and enthusiasm. Challenge stressors, however, were only related to higher levels of anxiety and to lower levels of comfort, but did not significantly affect depression or enthusiasm. Comfort as well as depression or enthusiasm partially mediated the relation between hindrance stressors and the work attitudes. Conversely, the only significant indirect effect of the challenge stressor on the work attitudes was via comfort.

Conclusions: Challenge and hindrance stressors differentially impact work-related affect, which partially explains their different effects on work-related attitudes.

Job Burnout Interventions: Taking a 'Realist' Review of the Evidence

Anthony Montgomery¹, Karolina Doulougeri¹, Katerina Georganta¹, Efharis Panagopoulou²

¹*University of Macedonia, Thessaloniki, Greece,* ²*Aristotle Medical School, Aristotle University, Thessaloniki, Greece*

Job burnout can have serious personal consequences for individuals, including broken relationships, problematic alcohol use and suicidal ideation. At an organizational level, it is related to reduced productivity, increased absenteeism, job turnover and early retirement. Unfortunately, burnout is noteworthy in that interventions to address it have been largely unsuccessful. Typically, interventions are either person-directed or organization-directed, or a combination of both. Even interventions that are initially successful see positive effects diminish over time. The contents, design, and target groups of burnout interventions programs are diverse and this means that direct comparisons are challenging. The most probable reason for this is that burnout represents a symptom of organizational dysfunction, not a bona fide outcome per se.

Traditional methods of review focus on measuring and reporting on programme effectiveness, often find that the evidence is mixed or conflicting, and provide little or no clue as to why the intervention worked or did not work when applied in different contexts or circumstances, deployed by different stakeholders, or used for different purposes (Pawson et al 2005).

An emerging model of research synthesis is “realist review”, which is designed to work with complex social interventions or programmes, and which is based on the emerging 'realist' approach to evaluation (Pawson et al., 2005, Greenhalgh et al., 2012, Best et al., 2013). It provides an explanatory analysis aimed at discerning what works for whom, in what circumstances, in what respects and how. The first step is to make explicit the programme theory (or theories)--the underlying assumptions about how an intervention is meant to work and what impacts it is expected to have. One then looks for empirical evidence to populate this theoretical framework, supporting, contradicting or modifying the programme theories as it goes. The aim is to enable decision-makers to reach a deeper understanding of the intervention and how it can be made to work most effectively.

The following paper utilizes the realist review approach to; (1) review the reasons why interventions have failed, (2) identify the process and content mechanisms as to why they fail, (3) locate the "real" place of burnout within the organizational system, and (4) recommend how future interventions should address job burnout. Specifically, the paper will review job burnout interventions in healthcare and education.

Crossover Effect of Optimism in the Context of the Job Demands-Resources Model

Ewelina Smoktunowicz¹, Roman Cieslak^{1,2}

¹*University of Social Sciences and Humanities, Warsaw, Poland*, ²*Trauma, Health, and Hazards Center, University of Colorado at Colorado Springs, Colorado Springs, USA*

The aim of the study was to examine the crossover effect of optimism as a personal resource in the context of the Job Demands-Resources model. Specifically, it was investigated (1) whether work-family conflict mediates the relationship between job demands and job burnout, and (2) whether this mediation is moderated by own (Partner A's) and life partner's (Partner B's) optimism (crossover effect).

The respondents were couples ($N = 88$) who were both employed and lived with their partners for at least one year. The following scales were used: Work-Family Conflict Scale (Netemeyer, Boles, & McMurrin, 1996), Oldenburg Burnout Inventory (OLBI; Halbesleben & Demerouti, 2005) and Life Orientation Test – Revised (LOT–R; Scheier, Carver, & Bridges, 1994) to measure personal resources operationalized as optimism. Job demands were measured with weekly average number of hours spent on work-related tasks. All questionnaires were completed by both partners. The hypotheses were tested with regression analysis using PROCESS macro (Hayes, 2013).

Results of the study indicated that the effect of job demands on job burnout was mediated by work-family conflict only when Partner A's optimism was medium or high and simultaneously Partner B's optimism was low or medium. When Partner B's optimism was high, the indirect effect of job demands on job burnout via work-family conflict was not significant. Thus, the results indicate that not only person's own resources can serve as a buffer against the impact of job demands on job burnout but also the personal resources of other people, e.g. a significant other's optimism. These cross-sectional results will be supplemented with the longitudinal analyses. The Time 2 assessment will be finished by April 2014.

Work Pressure and Sickness Absence among Primary School Teachers: The Relation of Time Spent Working During and After Working Hours

Tinka van Vuuren, Judith Semeijn

Open Universteit Nederland, Heerlen, The Netherlands

This study among teachers at three Dutch primary schools is about the relationship between registered sickness absence in the year before and their current experienced work pressure and time spent on work during and after working hours. Working more hours may seem to enhance productivity; it is a solution to deal with mental demands and work pressure.

However, it may help in the short term, but at a cost: the cost of sickness absence and lower productivity in the long term (Fritz, Yankelevich, Zarubin & Barger, 2010). The question therefore is whether teachers do experience and use enough off-job time for recovery (Sonnentag & Geurts, 2009).

Daily survey data gathered over the course of 2 work weeks from 42 teachers confirm that work pressure (the experience of working hard, much and fast) is related to mental demands at work. Teachers, who were more frequently absent the year before, appear to work more hours in and outside school during the week. Longer duration of sickness absence a year earlier is also associated with current longer work hours during the weekend. Employees who work more hours during the weekend experience more work pressure. Furthermore, employees who work more on weekends, also work more after working hours during the week. This study adds to research on work pressure, recovery and productivity by showing that the influence of time spent working after normal working hours plays a short term compensating role for teachers. But at the same time it may reinforce longer term negative outcomes in terms of sickness absence and thereby loss of productivity.

Managing Restructuring as a Work Environment Issue – A Mixed Methods Evaluation

Johan Simonsen Abildgaard^{1,2}, Karina Nielsen³

¹*University of Copenhagen, Copenhagen, Denmark*, ²*National Research Center for the Working Environment, Copenhagen, Denmark*, ³*University of East Anglia, Norwich, UK*

Background: Though downsizing and reorganization are recognized as a serious threats to the psychological wellbeing of employees (Kieselbach et al., 2009), OHP strategies to address these topics are limited. This study presents an evaluation of the effect of an organization level intervention (OLI) to alleviate the psychosocial consequences, specifically job insecurity (Hellgren et al., 1999), caused by restructuring, team merger and downsizing faced by Danish postal service mail delivers.

Theory: The evaluation framework of the study (Nielsen & Abildgaard 2013) is based on theories of sensemaking (Weick, 1995) and shared mental models (Daniels et.al., 1995; Weick, 1989), suggesting that we need to establish the extent to which the developed solutions to prioritized problems are seen as meaningful to employees and managers and that these perceptions influence the degree of implementation and hence the improvement on job insecurity caused by the OLI.

Method: The study uses a combination of interviews (N=105) and observation of meetings to assess which specific areas of the work environment are targeted by the OLI program and what action plans are developed to address these issues. To assess the long term effect of the activities on job insecurity a questionnaire survey administered immediately before the OLI and a year later (N=340, N=329, response rates 90% and 89%) is analyzed via multilevel modelling comparing the OLI intervention group with two comparison groups.

Results: The qualitative analyses of intervention activities suggest that not only have meaningful activities been developed, managers experience more commitment from employees in conducting replanning and organizational change. The quantitative evaluation shows a lower increase in job insecurity in the intervention group than in the comparison groups. This leads us to conclude that the participatory OLI is a relevant means to alleviate the negative effects of organizational changes.

Implications: The study indicates a method as to how organizations can implement OH practices that may help to minimize the adverse effects of restructuring. From a methodological perspective this paper underlines the necessity to combine quantitative and qualitative methods of evaluation.

The Financial Cost of Work-Related Stress and Psychosocial Risks to Society: A Systematic Review of the Evidence

Juliet Hassard¹, Kevin Teoh¹, Malgorzata Milczarek², Philip Dewe¹, Tom Cox¹

¹*Birkbeck, University of London, London, UK*, ²*European Agency for Safety and Health at Work, Bilbao, Spain*

The well documented relationship between psychosocial hazards and worker wellbeing can lead to significant financial costs to society. A better understanding of the financial burden of work-related psychosocial hazards is important to build a business case for stakeholders to take action. At the same time, a clearer understanding of what the financial costs of work-related psychosocial issues are can serve as a driver for policy makers to develop and implement suitable policies to protect their workforce.

Aim: The objective of this systematic-style review was to collate, review and synthesize evidence-based economic estimations of the burden of psychosocial risks and work-related stress on societal level outcomes.

Method: An iterative process was used to develop the search strategy, which began by conducting a scoping review. The information derived from the scoping review informed the initial development of the search strategy. Sources of evidence were searched, collected and reviewed from various information channels: the academic literature (i.e., searching 6 different academic databases); grey literature (i.e., Google/ Google scholar); information from reputable organization and subject matter experts. Root search terms, and associated free text variants, were identified for three facets of the research question: cost (e.g. 'financial', 'economic'); psychosocial hazard (e.g. 'job strain', 'harassment'); and work context ('job', 'workplace'). The developed search strategy and utilised search terms was peer reviewed by a panel of experts. The inclusion of studies was assessed against by peer-reviewed inclusion/exclusion criteria.

Results: The review identified 27 studies and reports from eleven different countries. The review of collected evidence observed a vary range of economic estimations of the burden of stress and psychosocial hazards on society: from 1987 to 2013. Most of the studies (n=24) can be classed as using either an inductive or deductive approach to estimate the costs of work-related psychosocial hazards on society level outcomes. A number of different methodologies were also recorded, including attributable fractions, friction analysis, and cost-of-illness analysis. It was found that the use of different types of economic methodologies had a consider impact on the observed estimation of impact, which may help to explain the vast range of yielded estimations of impact.

Discussion: Considering the evidence collectively there is clear evidence of a significant and real economic impact to society due to work-related stress and psychosocial issues. However, the results from the current study highlight the imperative need to strongly consider the implications of estimation methodologies, and the interpretation of their associated findings.

Challenge Stressors: Longitudinal Effects on Self Attitudes, Work Attitudes, and Health

Pascale S. Widmer¹, Anita C. Keller¹, Dianne H. Gardner², Norbert K. Semmer¹

¹*University of Bern, Bern, Switzerland*, ²*Massey University, Albany, Auckland, New Zealand*

Recent research suggests that some stressors (i.e. hindrance stressors) have mainly negative consequences, whereas others (i.e. challenge stressors) can simultaneously have positive and negative consequences (e.g., LePine et al., 2005). Although a number of studies have dealt with potential outcomes of challenge stressors, some criteria have received only limited attention (e.g., positive self-attitudes; cf. Widmer et al., 2012), and some have been neglected altogether (i.e., physical health outcomes). Furthermore, while sophisticated methods – such as meta-analyses (e.g., LePine et al., 2005), diary studies (Ohly & Fritz, 2010), and multi-source analyses (Wallace et al., 2009) – have been applied to the framework, there are no

longitudinal studies. We report results from a longitudinal study containing three waves, with two time-lags of one month each ($N = 393$). We analyzed relationships between challenge stressors and work attitudes (e.g. job satisfaction), self attitudes (e.g. self-esteem), and health indicators (e.g. sleep quality) using cross-lagged SEM. We expected positive effects of challenge stressors to appear only when their negative variance is controlled (e.g. by including hindrance stressors as a suppressor variable; cf. Cavanaugh et al., 2000). As the positive aspects of challenge stressors relate to self-affirming experiences, we also expected positive effects to be especially strong for self attitudes.

Regarding work attitudes, the only significant paths found were from work attitudes to challenge stressors over both time lags. Regarding health, there was a significant cross-sectional association at time 1, which was negative, as expected. Longitudinally, a positive path from challenge stressors to health for both time lags was found only when hindrance stressors were controlled, confirming the expected suppressor effect. Hindrance stressors had a negative effect on health. For self-attitudes, there was a positive cross-sectional association at time one. In addition, a positive effect on self attitudes was found longitudinally for both time lags, but only when hindrance stressors were controlled. Additional analyses showed that the positive longitudinal effect on health was mediated by self attitudes.

Although the lack of associations with work attitudes was surprising, our results indicate that challenge stressors contain aspects that provide an opportunity to develop self-esteem through demanding work situations, thereby contributing to personal growth and thriving at the workplace. They also confirm the ambiguous nature of challenge stressors, as, with one exception, positive effects were found only when hindrance stressors were controlled (cf. Widmer et al., 2012). Finally, our results confirm the importance of self-related attitudes in the stress process.

Psychological and Social Work Factors as Predictors of Mental Distress and Positive Affect: A Prospective Study

Live Bakke Finne^{1,2}, Stein Knardahl¹

¹National Institute of Occupational Health, Oslo, Norway, ²Norwegian University of Science and Technology (NTNU), Trondheim, Norway

The research on work-related mental health has traditionally focused on determinants for ill-health like depression, anxiety, mental distress and burnout. In the recent years the health-promoting perspective has attracted increasing attention. Furthermore, the research has been dominated by the demand-control (DC) and the effort-reward imbalance models. These models do not cover the whole range of psychological and social work factors, and future research should employ more comprehensive exposure measures. The current study investigated prospectively a *broad set of specific* psychological and social work factors as predictors of mental distress (symptoms of anxiety and depression) and as predictors of positive affect. When investigating work factors in relation to both ill-health and positive affect it is possible to identify if the predictors are common for the two dimensions of health, or different factors explain the two outcomes. This knowledge is important both on the practical and the theoretical/conceptual level.

The study was prospective with a full panel design. Employees were recruited from 48 Norwegian organizations, representing a wide variety of job types. A total of 3,660 employees responded at both baseline and at follow-up two years later. Baseline data were gathered from 2004 until 2009, and follow-up data from 2006 until 2011. Psychological and social factors were assessed by the General Nordic Questionnaire for Psychological and Social Factors at Work (QPSNordic). Mental distress was measured by the ten item version of the Hopkins Symptom Check List (HSCL-10). Positive affect was measured by two items from the SF-36 Health Survey and one item from the Work Ability Index (WAI). To account for the hierarchical structure of the data, multilevel linear regression analyses will be conducted. The results of the current study will be presented and discussed at the conference.

The Role of Work-Nonwork Boundary Management in Work Stress Recovery

Ulla Kinnunen¹, Johanna Rantanen²

¹*University of Tampere, Tampere, Finland,* ²*University of Jyväskylä, Jyväskylä, Finland*

There are individual differences in the styles people use to demarcate boundaries and attend to work and family and other nonwork roles. In segmentation work and nonwork roles have high separation, whereas in integration work and nonwork roles are combined. Thus, individuals can typically be assessed as being “high to low” on segmentation to integrating tendencies.

The main aim of the present study is to examine the profiles of boundary management and their relations to recovery experiences (psychological detachment, relaxation, mastery, control) during off-job time and employee well-being (exhaustion and vigour at work).

The study was conducted in spring 2013 among Finnish employees ($N = 1,106$) who filled in an electronic questionnaire sent to their work e-mail addresses. The response rate was 43%. Of the participants, 61% were women, the average age was 48 years, and about a half had children living at home. The participants worked most typically (61%) as higher white-collar workers. Boundary management was operationalized via cross-role interruption behaviours from work to nonwork and from nonwork to work (Kossek et al., 2012). The measurement of recovery experiences was based on the Recovery Experience Questionnaire, job exhaustion on the Maslach Burnout Inventory and vigour at work on the Utrecht Work Engagement Scale.

Our preliminary analyses with latent profile analysis (LPA) revealed five boundary management profiles: 1) work guardians (low in nonwork interrupting work behaviours and high in work interrupting nonwork behaviours, $n = 228$), 2) nonwork guardians (high in nonwork interrupting work behaviours and low in work interrupting nonwork behaviours, $n = 160$), 3) segmentators (low in both behaviours, $n = 205$), 4) intermediate (an average level in both behaviours ($n = 238$), and 5) integrators (high in both behaviours, $n = 257$).

The boundary management profiles differed in recovery experiences and employee well-being. It turned out that employees in the profile of segmentation had the highest experiences of psychological detachment from work, relaxation and control outside of work. In addition, job exhaustion tended to be highest in nonwork guardians, whereas vigour at work was highest in the integration profile. In all, of the boundary management profiles, especially segmentation seemed to be beneficial from the viewpoint of recovery experiences, but this was not positively reflected in occupational well-being.

Rewarding Salary: Application of the Effort-Reward Imbalance Model

Beata Basinska¹, Izabela Wiciak²

¹*Gdansk University of Technology, Gdansk, Poland,* ²*Police Academy in Szczytno, Szczytno, Poland*

Background: Salary is one of the most important rewards in work. In this study the effort-rewards imbalance model was applied (Siegrist, 1996). Following this idea the salary should compensate the effort spent to deal with job demands. Job demands are described as operational demands resulting from the work's tasks and organization of work (Cox et al., 2000). The aim of the study was to examine the relation between effort spent to operational and organizational demands, and received salary, in police officers' subjective judgment.

Methods: The following methods were used. Organizational demands were measured using the Effort Scale (Sigrist et al., 2004) and 1 item from the Psychosocial Risk Scale (Dudek et al., 2004). Operational demands were assessed using 3 items (work environment, traumatic events and shift-work). Satisfaction with salary was evaluated by 1 item from the Rewards Scale (Siegrist et al., 2004). Structural equation modelling was used for the analysis using AMOS v.21 and SmartPLS 2.0. A demands–salary imbalance ratio higher than 1.0 reflected occupational stress.

Group: Two groups of police officers filled in the questionnaire. The first group consisted of 363 police officers (54 females) serving in operational positions. The average work experience was 13 years (SD = 5.3). The second group consists of 51 (4 females) police managers. Their average work experience was 17 years (SD = 4.7).

Results: Police officers serving in operational positions had lower satisfaction from salary than police managers ($t = 3.14$ $df = 411$ $p = .002$). The results showed that the demands explained 11% variance in salary ($\chi^2 = 58.021$ $df = 25$ $p < .001$, RMSEA = .057 90CI = .030-.076). Only the relationship between organizational demands and salary was significant in the two groups. For the majority of police officers, the effort spent on operational demands was compensated by their earnings; however, organizational demands were not balanced by their salaries. The imbalance ratio for organizational demands and salary was larger for police officers serving in operational positions than police managers (54% and 33% respectively, $p = .005$).

Conclusion: The organizational demands and those not resulting from work tasks influence the subjective judgment of the appropriateness of salaries and result in occupational stress. Improvement of management efficiency may increase the sense of earnings adequacy among police officers, both in the operational and managerial position.

Developing Reflexive Learning in Occupational Health Psychology: The Use of Reflective Journal - A Case Study in Higher Education

Andreina Bruno

Università di Genova, Genoa, Italy

For many years we've been interested in how academic education could accompany undergraduate students to become future reflective professionals: the emphasis placed on reflexivity as a primary competence for professional development has brought universities to re-think educational activities and settings. University can play a key role not only by providing students with scientific knowledge and professional skills, but also by sustaining their reflective practices. In fact, the educational context with its relations doesn't only influence the development of reflective functioning; it also affects the way a subject use his reflective thinking in every situation he takes part.

The aim of this work is to present a case study of reflexive learning in a course of Occupational Health Psychology within a Master Degree in Psychology in the North of Italy. The paper discusses: 1) as university faculty teaching, our goals for students' learning, that are often tacit; 2) how specific teaching practices can promote undergraduates' professional identity by sustaining their reflective practices: in particular we refer to the use of reflective journal. Journal writing is used for generating a better awareness of self; helping to come to an understanding of the nature of professional practice; permits recording of learning incidents; enables the writer to capture reflection-in-action, and through this process, provides a means to consciously reflect on tacit practice (Shepherd, 2006). In keeping a journal the writers can pay explicit attention to practicing values, rather than just allowing them to have an implicit effect on the practice.

In our case, journals are proposed to describe and assess students' learning experience, its turning points and its outcomes. 20 narrative journals of 20 students are analysed through a content analysis. Narrative texts are analysed by selecting and detecting a range of linguistic markers, that we assume, according to the literature, to be related to reflexivity. Data analysis describes students' emerging reflective practices and their development during the training process. Data show that the development of a complex reflective practice is related to students' engagement in learning practices focusing on their ways of learning and generating professional knowledge. Action-learning and narrative techniques (such as diaries) are recognised as suitable for promoting reflexivity.

Promoting Balance at Work and Employee Health through a Worksite Based Participatory Intervention

Petra Lindfors, Eva Charlotta Nylén, Sara Göransson, Lars Ishäll, Gunnar Aronsson, Magnus Sverke
Stockholm University, Stockholm, Sweden

Research has consistently shown that employee health and well-being benefit from a balance between demands and resources at work but also from a balance between work-related efforts and rewards. Such balances are in turn associated with the balance between activation and opportunities for recovery, which are central for long-term health outcomes among employees and their managers. This presentation summarizes findings from a worksite based participatory intervention. The intervention uses a survey-feedback design as a basis for dialogue based reflexive workshops. In total, four half-day workshops were carried out over a 2-month period. In the workshops, employees identified the most immediate work environment problems and were asked to develop strategies to improve the balance between various factors at work. In doing this, the intervention aimed to integrate more strongly organizational work environment policies with the planning of regular activities within different work units in the organization. Self-report questionnaire data on work-related factors (e.g., demands and resources), health and well-being (e.g., recovery, self-rated health, subjective health complaints) were collected before the intervention and at a short-time follow-up about eight weeks after the intervention. While health-effects seem unreasonable considering the short follow-up period, preliminary findings suggest that this worksite based participatory organizational intervention may have positive effects on factors relating to the work climate.

Psychosocial Work-Place Stressors and Occupational Injuries: A Longitudinal Study of the General Working Population in Norway

Håkon A. Johannessen, Hans-Magne Gravseth, Tom Sterud
National Institute of Occupational Health, Oslo, Norway

Aims: Although several researchers have linked adverse psychosocial work factors to poor mental health, and poor mental health to an excess risk of occupational injuries, the evidence base for the relation between adverse psychosocial work factors and occupational injuries is sparse. This study aimed to examine the impact of psychosocial work-related stressors on subsequent occupational injuries.

Methods: A randomly drawn cohort from the general population in Norway aged 18–66 was followed up for 3 years ($n = 12,550$, response rate at baseline = 67%). Eligible respondents were in paid work in 2006 and 2009 or temporary absent from such work ($n = 6,745$). The following four work-related psychosocial factors were measured: job control, job demands, emotional demands, and role conflicts. The outcome of interest was self-reported occupational injuries leading to absenteeism.

Results: In total, 1.7 % (112 individuals) reported occupational injuries at 3-year follow-up. High role conflicts (OR=3.38; 95% CI = 1.93 - 5.93) and high emotional demands (OR = 2.21; 95% CI = 1.31 - 3.71), measured as averaged exposure across the three year period (T1+T2/2), were significant predictors of subsequent occupational injuries (T2). The population risk was estimated to 15.1% (95% CI = 5.2 - 26.2) and 15.6% (95% CI = 3.4 - 28.6), respectively.

Conclusions: We found a robust excess risk of occupational injuries attributable to role conflicts and high emotional demands at work. The burnout component 'emotional exhaustion' may be a mechanism through which role conflicts and emotional demands relate to an excess risk of occupational injuries.

Occupational Health Cultural Maturity: Concept, Measurement and Application to Industry

Jane Hopkinson, [Jennifer Lunt](#)

Health and Safety Laboratory, Derbyshire, UK

Background: Occupational health maturity reflects how proactive an organization is in their attitudes and management of occupational health (OH) risks. Key differences between occupational health and safety, in respect of, for example, risk perception and causal attribution, warrants a separation of OH Cultural Maturity from Safety Cultural Maturity. However, to date, those cultural maturity models that are available within the health and safety domain focus predominantly on safety issues. This provides limited scope in gaining an understanding of where organizations may struggle in the management of occupational health, or the behavioural and organizational drivers that affect their performance in managing OH risks. This presentation will therefore profile the development of an Organizational Cultural Maturity Index bespoke to Occupational Health (Health Risk Management Maturity Index) (HeRMMIn) together with associated solutions for advancing progression to the next stage of maturity. The presentation will culminate in a demonstration of the tool's successful use in measuring OH maturity within the UK construction industry. The research represented had two main aims:

- i) To develop a user-centred OH management Maturity Index for the UK construction sector that indicates solutions for improving cultural maturity.
- ii) To survey actual OH risk management maturity in the UK construction sector.

Method: Index development entailed an initial evidence synthesis and subject expert consultation to establish the index's theoretical basis and scope. The resultant framework (consisting of six elements) was then populated to assure clear progression between stages of OH culture maturity. A set of solutions aligned to the index were developed using a consensus based decision making process, together with a suite of leading/lagging indicators for validation purposes. Piloting was conducted to assess reliability, validity and usability prior to conducting the main survey with 252 health and safety managers from construction organizations.

Results: Reliability and validity checks demonstrated the index to have robust psychometric properties in terms of internal consistency, construct and criterion validity. The survey revealed good levels of OH maturity within the sample. However, as a potential selection bias due to using an opportunistic sample cannot be ruled out, the results should not be interpreted as the sector performing well already with no room for improvement. Future research exploring the relationship between self-reported maturity levels and actual knowledge/practice is therefore necessary as other anecdotal and statistical evidence suggests that the sector has lower levels of OH maturity. Nonetheless the findings do provide some important key messages for advancing the effectiveness of Occupational Health Risk Management within industry. Foremost it verifies OH cultural maturity as requiring separate consideration to current safety culture maturity. Secondly, it offers a way forward for enabling employers to overcome any attitudinal and behavioural barriers that may deter effective management of OH risk. Finally, it sets a precedent in providing a measure capable of reliably generating a targeted approach to improving and prioritising the management of OH across an industry sector.

Standardising Behaviour Change In Health and Safety: A Way Forward?

[Jennifer Lunt](#), Nikki Bell, Jane Hopkinson, Victoria Bennett

Health and Safety Laboratory, Derbyshire, UK

Background: Development of a standardised approach to the design and reporting of behavioural change interventions in the health and safety domain would allow clearer understanding of what does and doesn't work in encouraging safer and healthier behaviour in the workplace. Within other fields such as health promotion, initiatives are well underway to

standardise both intervention reporting (e.g. through development of a Behaviour Change Taxonomy) and intervention design by mapping intervention content onto a scientifically tested model of behaviour change (e.g. the Behaviour Change Wheel for complex interventions). Such approaches should overcome a longstanding ambiguity in the evidence base created by ad hoc intervention design and reporting processes. Extending these initiatives to health and safety and occupational health psychology should provide a logical way forward for clarifying what does and does not work in behaviour change in the health and safety context and in determining effective allocation of resource. Doing so, must however, contend with challenges created by a wide variance in behaviours according to hazard types, job types, industry sectors and organizational size. This presentation presents a framework developed by the Health and Safety Laboratory to guide systematic design of health and safety interventions aimed at reducing risk taking and/or promoting safer and healthier behaviour in the workplace. As such it is intended as a 'call to arms' for developing a more standardised approach within the occupational health psychology community.

Method: The approach to be presented is based on (a) a synthesis of 'lessons learnt' derived from behavioural safety, safety culture, safety cultural maturity, situational awareness and health promotion interventions, together with (b) a synthesis of drivers that affect risk taking across a range of health and safety hazards and (c) existing standardisation initiatives underway in health psychology. This synthesis is based on both literature reviews and expert consultation.

Results: As a potential solution for standardising behavioural change interventions in health and safety, a model will be presented that has been designed to convey important messages about behaviour change requirements in health and safety. This includes the need to: align approaches with underlying safety culture maturity; tackle root causes as well as immediate determinants and integrate with other management systems. The presentation will culminate by suggesting potential ways forward for assuring that standardised solutions remain relevant to local circumstances, for example by grouping key health and safety outcomes according to common behavioural determinants, and developing a behavioural change nomenclature specific to health and safety and occupational health psychology.

Transformational Leadership and Employee's Daily Job Crafting Behaviours: Exploring the Moderating Role of Promotion Focus

Jørn Hetland¹, Arnold B. Bakker², Hilde Hetland¹, Evangelina Demerouti³

¹University of Bergen, Bergen, Norway, ²Erasmus University, Rotterdam, The Netherlands,

³Eindhoven University of Technology, Eindhoven, The Netherlands

Aims: The first aim of the present study is to examine relationships between transformational leadership and employee's daily job crafting behaviours (increasing resources, increasing challenges, and reducing hindrance demands). The second aim is to explore if employee's personal promotion focus moderate this day – level relationship.

Method: This quantitative diary study includes 109 employees (response rate: 93.2%) working in 14 organizations in Norway. In order to measure transformational leadership (11 items from MLQ-form 5X) and job crafting (Tims, et. al., 2012), we adapted existing scales such that they could be answered on a daily basis. Promotion focus was measured by 5 items from the WRF-Scale (Neubert et. al., 2008). Multilevel analysis was performed using MLwiN 2.19.

Results: Multilevel analysis revealed significant positive relationships between daily transformational leadership and both increasing structural ($B = .155, p < .001$) and social resources ($B = .254, p < .001$). Furthermore, significant cross-level interactions from promotion focus were found in the relationships between transformational leadership and increasing structural resources ($B = .102, p < .001$), and increasing challenges ($B = .134, p < .001$), indicating a positive relationship among employees with a high promotion focus in contrast to those with a low.

Conclusion: Daily transformational leadership behaviours increase job crafting behaviours in particular for employees with a high promotion focus. Implications for research and practice will be discussed.

Employees' Innovative Work Behaviour Following Structural Changes in Social and Health Care Organizations: How Vulnerable is the Behaviour to Stress and Decreased Work Ability?

Laura Pekkarinen¹, Timo Sinervo¹, Merja Sankelo², Johanna Heikkilä³
¹*National Institute for Health and Welfare, Helsinki, Finland*, ²*Seinäjoki University of Applied Sciences, Seinäjoki, Finland*, ³*JAMK University of Applied Sciences, Jyväskylä, Finland*

The rapidly changing organizational context in health and social services is affecting both the employees and service delivery. Simultaneously, social and health care employees are expected to be more innovative and flexible in their work processes. In this study, we investigate the associations of organizational change to employees' innovative behaviour, and to their psychosocial resources, stress and work ability. Further, we examine the relationships between psychosocial resources (team climate and organizational justice), stress and work ability, and innovative work behaviour among employees whose organization has undergone a structural change in the previous two years.

Cross-sectional survey data for this paper were obtained in 2012 from 2017 employees working in six social and health care organizations in Finland. The survey was conducted as part of *Osuva*-project where a multicentre study combined four action studies in addition to the survey. In the survey, employees rated their individual innovative work behaviour. Survey also included measures of team climate, procedural and relational justice, stress and work ability. The associations were analysed using standard statistical methods, including general linear models.

The majority of the respondents had gone through a structural change ($n = 1,647$). The results revealed that employees' innovative work behaviour depends on the degree to which the change is regarded as beneficial. If employees viewed the structural changes as beneficial, they reported not only significantly greater innovative behaviour but also better psychosocial resources and work ability, as compared to those who viewed the changes negatively. Further, their innovative work behaviour was more strongly related to work ability. We discuss the importance of employees' well-being in relation to innovative behaviour after organizational changes.

Work-Life Balance and Effectiveness in Family-Friendly Companies

Marina Romeo¹, Rita Berger¹, Montserrat Yepes-Baldo¹, Luis Torres^{2,1}
¹*University of Barcelona, Barcelona, Spain*, ²*University of Nottingham, Nottingham, UK*

Purpose: Family-friendly policies are often designed for strategic management purposes, with the intention of generating initiatives that help employees to balance their work and life aspects and, through this benefit, improve employee performance (Chinchilla & Torres, 2006). However, until now little scientific research has analysed the relationship between family-friendly policies and the employee's perception of work-life balance (Kalliath & Brough, 2008; Yuile et al., 2012). Additionally, studies have usually used ad hoc measures to evaluate individual performance (Richard et al., 2009) within studies on work-life balance (i.e.: identification (Kim et al., 2010); motivation (Skudiene & Auruskeviciene, 2012); employees satisfaction (Aharon et al., 2011); engagement (Beauregard & Henry, 2009; Brammer et al, 2007); well-being (Gröpel & Kuhl, 2009)). As a result, the purpose of this study is to increase scientific knowledge on this topic exploring the relationship between family-friendly policies, employee's work-life balance (WLB) and individual performance.

Methodology: Participants were 814 employees from two Chilean companies with different stages of development on Family-Friendly Policies. The IESE Family-Responsible Employer Index (IFREI), the Survey Work-Home Interaction – NijmeGen (SWING -SSC) and the Balanced Scorecard (BSC) were used. Data analysis was based on independent sample t-test and Pearson's correlation.

Results: Results showed a small but significant relationship between the perception of the family-friendly development stage and individual performance, and between “Negative home-work interaction” and individual performance. No statistical differences were found between the stage of family-friendly development and WLB perceptions.

Limitations: The main limitation is the number of participating organizations. Future research should include organizations from other sectors, sizes and countries in order to get a deeper insight into the explored relationships.

Research/Practical Implications: These results imply future efforts to evaluate family-friendly policies impact, not only on organizational level but also on individual level, to improve employees' wellbeing and performance.

The Antecedents and Outcomes Associated with Organizational Cynicism among Police Recruits

Andrew Noblet¹, Amanda Allisey¹, Anthony LaMontagne², Kathryn Page²

¹*Deakin University, Melbourne, Australia,* ²*University of Melbourne, Melbourne, Australia*

Background: There has been considerable interest in the development of cynicism amongst law enforcement professionals. However, research to date has tended to focus on the antecedents and outcomes of cynicism that is concentrated at the public level and recent findings suggest that cynicism directed towards the employing agency is more frequent amongst police and may have significant implications for the employing organization as well as the individual officer.

Aims: This study focused on a sample of Australian police recruits who were completing a 24-month probationary period and sought to examine how levels of cynicism fluctuate throughout these first two years. We also aimed to assess the influence of two job stressors (role conflict and job demands) as work-based antecedents of organizational cynicism and job dissatisfaction, and tested the extent to which cynicism and dissatisfaction were intermediary variables in the relationship between the job stressors and officer wellbeing.

Method: All probationary officers within six divisions of a state-based police service (n=714) were invited to complete a questionnaire consisting of scales designed to measure the study variables. A total of 329 officers returned completed surveys, representing a response rate of 46%. The antecedents and consequences of organizational cynicism, as well as the effects of the proposed mediators (cynicism and dissatisfaction), were assessed using path analysis.

Results: Within the current sample, cynicism was significantly greater amongst officers who had been working with the organization for more than 12 months when compared with those who had been with the employing agency for less than 12 months. In terms of the path-analysis, results indicated that high levels of role conflict and job demands were associated with lowered job satisfaction and increased organizational cynicism, while job satisfaction and organizational cynicism mediated the relationship between the two job stressors and officer wellbeing.

Conclusions: The results of this study extend the existing literature on organizational cynicism and cynicism within policing organizations in three important ways. First, the findings provide evidence that the development of cynicism directed towards the organization amongst newly

recruited officers occurs at a relatively rapid rate. Second, the results suggest that cynical attitudes towards the organization are likely to be associated with increasing job demands and conflicting role requirements. Third, the findings shed light on the mechanisms through which the organizational environment influences early-career officers' individual wellbeing and suggest that job stressors are likely to impact on the wellbeing of police recruits via their influence on cynicism and dissatisfaction.

High Performance as a Double-Edged Sword

Luc Bourgeois, Andrew Neal, Hannes Zacher

University of Queensland, Brisbane, Queensland, Australia

Introduction: The effects of goal setting on job performance are well established (Locke & Latham, 2002). Researchers have also demonstrated that high levels of job performance lead to positive outcomes such as increased job satisfaction (Latham & Locke, 2007), positive affect (Koestner et al., 2002), and self-efficacy (Seo & Illies, 2009). The intuitive assertion that high job performance fosters employee well-being has also been made (Sonnentag, 2002). However, claims of positive effects of job performance on well-being outcomes are controversial as researchers have shown that high job performance may lead to increased dissatisfaction if goals are not met (Heath et al., 1999). We argue that, in reality, these links are more complex than previously acknowledged and that high goals and high performance can lead to lower well-being in certain situations. The current study serves as an initial step towards exposing that reality.

Method: A sample of 54 online workers (or "eLancers") was recruited to participate in a daily diary study that required them to complete two diary entries per day for one week. Entries required participants to set daily goals and report daily performance as well as answering questions related to affective states (i.e., tense arousal, energetic arousal, and hedonic tone), cognitive mechanisms (goal confidence, commitment, and importance), emotional exhaustion, and job satisfaction.

Results: A series of multivariate latent change analyses were conducted to investigate intraindividual change across the five working days. Goal level (i.e., money to earn during the day), performance (i.e., money earned during the day), affect, emotional exhaustion, and job demands were included to determine whether setting high goals and high performance would lead to decreases in report affect levels, increased emotional exhaustion, and increases in reported job demands. Results show that affect levels deteriorate throughout the day regardless of performance while emotional exhaustion and job demands both increase when individuals perform best.

Discussion: Results indicate that performing well does not always have positive consequences. Jobs that require constant effort and concentration while allowing for only very little job autonomy may increase the likelihood of workers burning out in an effort to achieve high goals. In these settings, high performance means more work is performed, which, in turn involves encountering more job demands. It appears that the job satisfaction that comes from performing well may be overridden by difficult work conditions and ultimately lead to diminished psychological health.

Developing a Performance Indicator for Psychosocial Risk in the Oil and Gas Industry

Linn Iren Vestly Bergh^{1,2}, Siri Hinna¹, Stavroula Leka², Aditya Jain³

¹Statoil ASA, Stavanger, Norway, ²Centre for organizational Health and Development, University of Nottingham, Nottingham, UK, ³Nottingham University Business school, Nottingham, UK

Psychosocial risks can have a significant impact on health and safety in the oil and gas industry. In order to handle such risks, it is important to have sustainable and comprehensive systems for psychosocial risk management embedded in the organizational operations and

processes. Linking the management of psychosocial working environment into an organization's strategy by using familiar concepts or techniques such as performance indicators is essential when integrating psychosocial risk management into a larger process. The purpose of this article is to describe the development of a health, safety and environment (HSE) indicator for psychosocial risk in the oil and gas industry. The development process included a number of interrelated steps utilising the evidence-based practice model. This has resulted in the establishment of a proactive exposure indicator automatically published in the internal organizational performance management system of a large oil and gas company. This presentation will focus on the process of establishing the indicator by incorporating the elements of evidence-based practice described by Briner (2012). In the evidence-based practice model decision-making is based on four aspects: the company context; key stakeholders' and practitioners' experiences; as well as research evidence. As such these sources shaped both the content and construction of the HSE indicator. It was important to include these sources of knowledge in order to create an indicator that the business could recognize as sustainable and was fit-for purpose, i.e. measured what it was supposed to and that it was an integral part of the company's management system.

The Gendered Life-Course and Work-Life Interaction: How Part Time Work relates to Variables of Work-Life Interaction for Men and Women across Family-Life Stages

Ariane Wepfer¹, Rebecca Brauchli¹, Gregor Jenny¹, Oliver Hämig², Georg Bauer¹
¹University of Zurich, Zurich, Switzerland, ²Careum Foundation, Zurich, Switzerland

Introduction: Work-life conflict is known to be related to employee health and well-being (Greenhaus, Allen, & Spector, 2006). One of the many predictors of work-life conflict is the numbers of hours worked (e.g. Greenhaus & Beutell, 1985). This study takes a life-course and gender perspective when looking at the relation of part-time work and work-life conflict and balance.

Background: Although gender roles have changed over the past forty years, the "breadwinner" vs. "home maker" template still shapes institutions and societal expectations, and thus men and women's choices regarding work & family (Moen & Chermack, 2005). E.g. it is very common among women to work part-time in order to take care of children or elder relatives, whereas only few men do so (Hill et al., 2008; Powell & Greenhaus, 2010). Therefore, scholars have stressed the need to take a life-course and gender perspective when talking about issues of the work-life interface (Moen & Sweet, 2004). The concept of family-life stages has been used previously to explore differences in the work-life interface under a life-course perspective (Erickson, Martinengo, & Hill, 2010). The current study investigates how working part-time vs. full-time affects the interface of work and private life differentially by family-life stage and gender.

Current Study: The study explores the interactive effect of family-life stage, level of employment and gender on work-life conflict and work-life balance.

Data & Method: The data was taken from a survey study on work-life issues and health at four large Swiss companies in the service sector. A subsample of N=4,100 workers met the criteria for inclusion. A series of ANOVAs was performed in order to answer our research questions.

Results: A significant three-way interaction of gender x family-life stage x level of employment was found for work-life conflict. Women working part-time in family-life stages with young children experienced less work-life conflict than men working part time during those family-life stages. The same significant three-way interaction was found for work-life balance. Women working part-time in family-life stages with young children at home reported more work-life balance than men working part time during those family-life stages.

Discussion: Possible explanations for these results are lower levels of part-time work among women with young children compared to men. Furthermore, there are gendered reasons for choosing part-time work. The results are discussed in light of institutional and societal expectations, societal needs and economic necessities. Implications for companies and policy makers are explored.

Implicit and Explicit Risk in Obesity and Unhealthy Eating

Tony McCarthy, Calvin Burns

University of Strathclyde, Glasgow, UK

Obesity is a health problem in many developed countries and is a growing problem worldwide. It is generally recognized that obesity results from a genetic predisposition, and from unhealthy eating and lack of exercise. Risk perception is an important factor to consider when communicating food safety risks like unhealthy eating. Previous research has drawn on the psychometric paradigm to investigate attitudes to food, and trust in information sources about food risks. Although the psychometric paradigm has been very influential in the study of risk perception, it has limited studies to the use of explicit attitude measures (questionnaires) which require people to consciously consider and state their attitude to attitude objects (i.e. by asking people to think about a hazard and state how risky it is). Implicit attitude measures are being used increasingly in social cognition research. These measures can offer new insights into risk-related attitude formation and change about eating unhealthy food.

Implicit measures assess attitudes that individuals may not be consciously aware that they hold and are less susceptible to response biases like social desirability because they are activated automatically. Implicit attitude measures very rarely correlate with explicit attitude measures and are thought to influence spontaneous behaviours or behaviours that individuals do not try to consciously control (e.g. emotional reactions). They have been used to investigate self-regulation in food choice and consumption behaviour but have not been used to investigate risk attitudes or perceptions about food risks like unhealthy food.

We developed an implicit measure to investigate automatically activated risk-attitudes towards unhealthy foods. This paper will report the findings from a study using this measure. We expect our results to yield implications for the practice or risk communication but also to make theoretical contributions with respect to how emotions influence risk attitudes and perceptions.

Healthy Organizations in Sweden: Positive Organizational Factors in the Public and the Private Sector

Åsa Stöllman¹, Magnus Svartengren², Tomas Eriksson¹, Ulrich Støtzer², Marianne Parmsund², Eva Vingård¹

¹*Uppsala Universitet, Uppsala, Sweden*, ²*Karolinska Institutet, Stockholm, Sweden*

Background: Key factors for a healthy workplace includes more than risk factors. Promoting positive factors in the work environment is of crucial importance. In the studies “Health and Future” in the public and the private sector, the aim was to find factors at an organizational strategic level that are associated with low sickness absence among employees. With theories from positive organizational psychology it is possible to investigate which factors contribute to a healthy organization.

Method: The organizations included were a strategic selection of municipalities and county councils in the public sector and private companies with ≥ 74 employees in Sweden. In this part of the study a qualitative method was used and involved individual and group interviews with managers in healthy (few sick listed employees) and less healthy organizations from all of Sweden.

Result: In the studies we found that the same basic structure characterized the healthy organizations, for both the public and the private sector, even though the framework for the organizational model differs between the public and the private sector. The factors involved leadership philosophy, an openness in communication, an awareness and knowledge of sickness absence in the organization and encouraged participation among the employees. Based on the companies' values, we found a tendency to a more distinct general structure to work with these organizational factors in the healthy private companies.

Conclusion: Organizational factors differ between healthy and less healthy organizations. The basis structure for these factors is highly similar in both the private and the public sector. These factors could be used in an action plan to manage and improve the organization.

The LANE Study: New Longitudinal Data on Burnout Development among Nurses During Education and the First Years of Working Life

Ann Rudman, Petter Gustavsson

Karolinska Institutet, Stockholm, Sweden

The future development of nurses and the nursing workforce, nationally and internationally, may be determined by many factors, such as student engagement, outcome of higher educational studies, working conditions and development of burnout. In the case of nurses, stress and burnout have frequently been reported to play an important role regarding intention to leave, and actually leaving the nursing profession. In particular, early-career burnout among nurses affects health and professional development early on in the career and generates a permanent loss of resources. Since increased levels of long term sick leave due to psychological ill health among nurses were noted in Sweden in 2000 a longitudinal project was initiated called the Longitudinal Analysis of Nursing Education /Employment (LANE) study.

The aim of this presentation is to compile results from the LANE study, including new longitudinal data on burnout development, antecedents and consequences of nurses' different developmental patterns during education and the first years of working life. In the LANE study, three national cohorts (of over 4,500) nursing students were followed yearly in order to understand the development of ill health during the education and the first years of working life. The analyses have a particular focus on mapping the progress of burnout symptoms during the transition between education and employment and to investigate the symptoms, causes and consequences. It is important for organizations employing new graduates to pay attention to nurses who show early signs of burnout, and provide a resourceful work environment with a suitable workload, sufficient introduction, management support, satisfactory collaboration with colleagues, and role clarity.

The Role of Personality Traits in the Process of Recovering from Work.

Leif W Rydstedt¹, Mark C Cropley², Jason Devereux³

¹*Lillehammer Univeristy College, Lillehammer, Norway*, ²*University of Surrey, Guildford, UK*,

³*LR Scandpower, London, UK*

The long-term relationship between job stress and the subsequent need for recovery has been firmly established in the literature. Less is known however about the relationship between personality traits and the work-related need for recovery. The purpose of this study was to demonstrate the relationship between Neuroticism (EPQ) and trait rumination on perceived need for recovery from work

The sample consisted of 2171 British wage-earners (38% females, 62% males; mean age 42.3 years at baseline) from a wide range of occupations. A baseline survey contained questions about job stress, personality scales and the need for recovery from work. A second survey was distributed about 1.5 years later, and also included the perceived need for recovery

An initial regression analysis showed that neuroticism ($\beta=.240$; $p<.000$) as well as trait rumination ($\beta=.160$; $p<.000$) (measured at baseline) was significantly related to the follow-up need for recovery ($R^2 = .136$; $p<.000$). Secondly, a hierarchical regression analysis, initially controlling for baseline need for recovery ($R^2 = .436$; $p<.000$) and baseline job stress ($R^2 = .015$; $p<.000$), substantially reduced the relationships between both traits. While neuroticism still remained significantly related to the need for recovery from work ($\beta=.082$; $p<.000$), rumination failed to affect this outcome.

An elevated need for recovery from work appears to be accompanied by a long period of time where several job-related and social precursors may interact with individual dispositions to affect the outcome. It should also be mentioned that the baseline need for recovery was strongly correlated with the two personality traits applied in this study – and controlling for the baseline measure may therefore have led to an underestimation of the true influence of the personality traits at the follow-up.

Impact of Communication within the Surgical Team on Surgical Site Infections: Integrating Content, Time, and Tasks.

Norbert K. Semmer¹, Franziska Tschan², Julia Seelandt², Sandra Keller², Anita Kurmann³, Daniel Candinas³, Guido Beldi³

¹University of Bern, Switzerland, Bern, Switzerland, ²University of Neuchâtel, Switzerland, Neuchâtel, Switzerland, ³University Hospital Bern, Bern, Switzerland

Background: Surgery is a classical team effort, but the impact of case-relevant and case-irrelevant communication within surgical teams on morbidity rates remains widely unknown. This study assesses the impact of intraoperative communication and distractors on surgical site infections (SSI), one of the most frequent surgical complications. We postulate (1) that patient-related content is protective, and (2) that non-patient related content is a risk factor, but only during the last phase of the operation.

Methods: A prospective observational study was performed in 103 patients undergoing major elective open abdominal procedures. Case-relevant and case-irrelevant communication and distractors between incision and closure were observed by trained work psychologists. The primary outcome parameter was SSI 30 days postoperative.

Results: A total of 21 (20.4%) SSI were diagnosed. During 459.4 hours of observation, 8,780 case-relevant and 2,584 case-irrelevant communications and 24,410 distractors were identified. Multinomial logistic regression analysis revealed that case-relevant communication during the entire procedure was associated with a significant reduction in organ/space SSI (relative odds 0.856, 95% confidence interval [CI] 0.741-0.988; $P=0.033$). Case-irrelevant communication during the closing phase (last 20 minutes) of the procedure was associated with a significant increase of incisional SSI (relative odds 1.170, 95% CI 1.039-1.1317; $P=0.009$). Incidence and type of distractors had no effect on SSI.

Conclusions: As expected, case-relevant communication was a preventive factor for organ/space SSI. It assures the exchange of information, may foster the development of a shared understanding of the task, and facilitates the immediate correction of misunderstandings and errors. High case-irrelevant communication was a risk factor only for incisional site infection and only during the last 20 minutes of the procedure. At this time, the most difficult part of the surgery is finished; what is left resembles routine activities, during which people are more likely to engage in case-irrelevant talk. Furthermore, the effects of demanding tasks may manifest themselves; particularly after finishing the period of high workload, resulting in diminished attention. Finally, although supervised by an experience surgeon, the task of closing is often performed by junior surgeons; they can shield themselves less effectively from distracting conversations than experienced surgeons, the task is more demanding for them, and engaging in nonrelated communication while performing it may make them especially vulnerable, especially after a long and fatiguing surgery. All of these factors may increase the risk of micro-infections.

Are Innovation-Promoting Working Conditions also Health-Promoting?

Mareike Adler, Eva Bamberg

University of Hamburg, Hamburg, Germany

Innovation plays an important role for organizations' competitiveness and success. So it is necessary for organizations to keep and improve their innovativeness. In work and organizational research there is a clear consensus that job characteristics have an effect on innovation and job-performance in organizations (Damanpour, 1991; Hammond, Neff, Farr, Schwall, & Zhao, 2011; Hülshager, Anderson, & Salgado, 2009).

Health-related research on the other hand has also found relationships between job characteristics on positive and negative well-being of employees (Crawford, LePine, & Rich, 2010; De Jonge & Dormann, 2006; Hakanen, Schaufeli & Ahola, 2008; Schaufeli, Bakker & Van Rhenen, 2009). Up until now, there are only a few studies that focus on the question of whether aspects that are beneficial for innovativeness at work are also beneficial for the health of employees. One can assume that job characteristics may be innovation-promoting but at the same time health is impaired – and vice versa. Also, job characteristics could improve innovations in organizations while improving employee's health too. Within this context, the differentiation between structural and social job resources and between challenge and hindrance demands is important.

The present study examined whether a distinction can be made between challenge and hindrance demands and between structural and social job resources. An analysis was conducted of whether job demands and job resources are simultaneously innovation-promoting and health-promoting. Furthermore, an exploration of whether innovation in organizations can be improved, through job redesign, while impairing employee's health at the same time was assessed.

The research was conducted using a German sample; with employees working in different organizations in different industries. The type of jobs within the sample was rather heterogenous. An online questionnaire was used which comprised job demands (e.g. time-pressure, illegitimate tasks) and job resources (e.g. task complexity, social support) as predictors of innovation (e.g. innovative work behavior) and health (well-being, emotional exhaustion).

The results confirmed the aforementioned differentiation of job characteristics. Furthermore, structural equation modeling analyses offered promising results with evidence showing that job resources to be simultaneously innovation-promoting and health-promoting. However, the magnitude of the relationship between resources (task-related resources, social resources) and innovation differs from the relationship to indicators of health. With regards to job demands as influencing variables on innovation and health, the analyses revealed both interesting and heterogenous results. Based on these results, the implications for innovation and health-promoting job redesign will be discussed.

Predictors of Work-Family Conflict and Enrichment: An Individual and Dyadic Exploration.

Joana M. Vieira¹, Marisa Matias¹, Frederick G. Lopez², Paula M. Matos¹

¹*Faculty of Psychology and Educational Sciences, University of Porto, Porto, Portugal,*

²*College of Education, University of Houston, Texas, USA*

A large body of research on work-family interface has been disseminated over the past few decades. Despite this proliferation of research and the increasing number of studies examining the antecedents of work-family conflict and enrichment, most of the existing studies have focused on one or a few particular predictors, with a clear overemphasis on work-family conflicting dynamics.

The present study aims to overcome these limitations by exploring a broad and diverse range of potential predictors of work-family dynamics, and by contemplating as outcomes both negative and positive aspects of WF conciliation (i.e., conflict and enrichment), as well as its bi-directionality (i.e., effects from work-to-family and from family-to-work).

A two-step procedure was used to accomplish these goals. Firstly, a sample of 580 working parents, involved in dual-earner relationships, was used to explore the differential effect of socio-demographic variables, structural variables from both work and family domains, and psychological variables (attachment, role salience, perception of support, job and family satisfaction) in the prediction of work-family dynamics. The variables revealed to be significantly predictive were, explored in a second step by using a dyadic design which consisted of 540 dual-earner couples with pre-school children. The effects of these predictors were thereafter analysed at both individual and interpersonal levels (i.e., on the partner). These results are expected to offer a broader and more systemic understanding of work-family dynamics within the family.

How Are They Now? Managers' Well-Being and Organizational Attitudes after the Restructuring of Their Job Positions in a Swedish Governmental Agency.

Claudia Bernhard-Oettel^{1,2}, Johanna Stengård^{1,2}, Katharina Näswall³

¹*Stockholm University Dep of Psychology, Stockholm, Sweden,* ²*Stockholm Stress Center, Stockholm, Sweden,* ³*University of Canterbury, Christchurch, New Zealand*

Planned organizational changes often aim to secure organizational sustainability through the means of optimising structures and strategies. However, for employees such organizational changes often imply job changes and the loss of familiar routines.

Plausibly, this increases perceived uncertainty and may have negative effects on employees' organizational attitudes and well-being during the change. If levels of well-being and organizational attitudes are negatively affected in the long run, this may pose threats to the initial aim to secure organizational sustainability. This may even more so be the case if employees such as managers show long-term negative reactions, since managers are in key positions to promote the organizations aims vis à vis employees. Whereas there is much research on employees' reactions towards organizational change, few studies have specifically analysed managers' reactions at different organizational levels. Also, many studies focus on certain aspects of uncertainty, but few inspect the consequences of (unwanted) job, task or responsibility changes.

Accordingly, this study aimed to investigate managers' well-being and organizational attitudes after organizational changes of management structures. More specifically, it studied how changes in managers' organizational attitudes and well-being related to changes in job positions, tasks and responsibilities shortly after the organizational restructuring, and more than a year later.

The study used questionnaire data collected from managers in a Swedish governmental agency undergoing structural changes. During this period all managers had to go through a new recruitment process. Questionnaires were sent out at T1 (summer 2011, one month before the change process started), T2 (spring 2012, two months after the organizational change was finalised) and T3 (summer 2013, 18 months after the organizational change was finalised).

Data are currently being analysed cross-sectionally (N = 173, 144, and 125) and longitudinally (N = 91 with complete data for t1, t2 and t3). The preliminary findings show the percentage of managers who rated their job positions favorably steadily decreased from T1 to T3, and this related to a significant decrease in self-rated health and job satisfaction. Interestingly,

perceptions of tasks and responsibilities of their old and new jobs were still rather similar at T2. How the perceptions of changes in tasks and responsibilities relate to attitudes and well-being a year later (T3) is currently under analysis.

Where Did The Work Go? Assessing the Psychosocial Work Environment as a Work Flow Process.

Liv Starheim

Technical University of Denmark, Lyngby, Denmark

Improvements of the psychosocial working environment are commonly initiated in workplaces based on the results from employee questionnaires. The results from the questionnaires should address the possible solutions and programs following these pinpointed problems. However, more frequently the members of the workplace cannot draw on the kinds of conclusions about actions from the information gathered in such questionnaires. Instead, they are often left with problem areas and, without the knowledge of the impact of the problems, no coherent solutions.

This intervention project aimed to develop a work environment assessment tool based on the workflow analysis in Lean. The close connection between the description and analysis of the flow of task and the assessment of the experienced psychosocial work environment suggests improvements closely connected to conducting the core task. From this perspective an improved psychosocial work environment is closely linked to high performance and coordination around performing the core task.

The tool is to be developed and tested in 6 hospital wards. The preliminary results from the developing and testing of the assessment tool in contrast to dialog based tools will be discussed with reference to the improvement of psychosocial factors within the work place.

Patient Aggression In Healthcare Contexts: What Kind Of Resources Do Physicians And Nurses Need?

Daniela Converso¹, Silvia Gilardi², Chiara Guglielmetti², Sara Viotti¹

¹*University of Turin, Turin, Italy,* ²*Università degli Studi di Milano, Milano, Italy*

Introduction: Both national and international studies have highlighted the fact that healthcare workers are increasingly facing episodes of verbal and physical violence by third parties. Empirical evidence supports the hypothesis that aggressive behaviours by patients or relatives can generate burnout processes. However, few studies have investigated the organizational and psychosocial resources that can lessen the impact of such social stressors on the well-being of healthcare workers.

Objectives: The aims of this study are to analyse: a) the consequences of verbal violence by patients and relatives towards nurses and physicians; and b) if and under what circumstances different types of resources (colleagues support, managers support, leadership quality, decisional autonomy and meaning of work) lessen the negative impact of verbal aggression on burnout and emotional well-being.

Methodology: A cross-sectional survey was conducted during 2011-2012. A total of 618 nurses and 210 physicians working within different departments in 5 general hospitals in Northern Italy were invited to complete a self-report questionnaire.

Results and Conclusions: A series of moderated stepwise regressions analyses were conducted. The results highlighted that aggressive behaviours are important predictors of burnout and emotional well-being for both groups. Although doctors and nurses differ neither in terms of perceived patient's aggression, nor of burnout and well-being, the research identified differences in the patterns of resources that protect them against social stressors tied to their interaction with patients. The different role played by social support for physicians and nurses to buffer the effects of patient aggressive behaviours will also be discussed.

Do High Job Demands Lead to the Development of Workaholic Tendencies? Evidence from a Longitudinal Investigation.

Cristian Balducci¹, Lorenzo Avanzi², Franco Fraccaroli²

¹*University of Bologna, Bologna, Italy,* ²*University of Trento, Trento, Italy*

Research on workaholism (i.e. work addiction) has increased a lot in the last decade or so. This research has documented that the phenomenon has the potential to negatively impact on both individual and organizational well-being.

However, a number of issues related to workaholism are still quite unclear; among them, its relationship with job demands. According to some, external stimuli such as constantly elevated job demands may lead to (or reinforce) workaholic tendencies. Others, to the contrary, argue that workaholics actively contribute to create their own job demands.

Unfortunately, most of the evidence on workaholism is still based on cross-sectional studies. Thus, the present study explored the relationship between workaholic tendencies and job demands by adopting a full panel longitudinal research design. Whether workaholic tendencies had a lagged effect on psychological distress (mainly symptoms of anxiety and depression) was also explored; thus contributing to the literature on the individual effects of workaholism.

The sample consisted of 174 employees within the health sector (86% women), which mostly represented nurses, administrative staff and medical doctors. Data were collected by means of a self-report questionnaire which contained validated scales and was administered to the sample during working hours. The time lag between the first and second waves of data collection was one year. The analysis consisted of a path analytic model implemented by using LISREL software, in which the variables of interest were workaholism, job demands, and psychological stress symptoms. All of these variables were measured at both time 1 and time 2. Gender was also included in the model as a control variable.

Preliminary descriptive analysis showed the sample reported very high job demands, while the levels of workaholism were not particularly high. In line with previous studies, the results of path analysis showed that time 1 workaholic tendencies had a positive effect on time 2 psychological stress symptoms. Time 1 job demands had a positive impact on time 2 workaholic tendencies. To the contrary, no evidence for a lagged effect of time 1 workaholic tendencies on time 2 job demands was found.

Overall the results suggest that very high job demands may lead to the development (or exacerbation) of workaholic tendencies. Thus, these results confirm that workaholic tendencies have a detrimental effect on psychological health. In terms of implications, the results indicate that the prevention of workaholism may benefit from a primary prevention which focuses on which job demands of individual employees are monitored and moderated by their managers and supervisors.

Attachment and Work-Family Dynamics in Dual-Earner Couples: Does Career Role Orientation Mediate this Relationship?

Marisa Matias, Joana Marina Vieira, Paula Mena Matos

Faculty of Psychology and Education - Porto University, Porto, Portugal

Research on the work-family interface has proliferated in the past decades; however, there has been a lack of studies addressing how individual differences and psychological characteristics impact work-family balance and how couples interact on this regard. This study intends to overcome these gaps by addressing the role that adult attachment plays on work-family conflict and enrichment, and the mediating role of career orientation.

A sample of 547 dual-earner couples, who have at least one pre-school aged child was used. The Actor-Partner Interdependence Mediation Model (APIMeM; Lederman, Macho & Kenny,

2011) was employed to assess how mothers and fathers attachment orientation affected their own and their partner's levels of conflict and enrichment. Mothers and fathers career orientation were considered as a possible mediator of these associations.

The results showed that attachment avoidance positively predicted work-family and family-work conflict for both mothers and fathers; moreover, for mothers it also negatively predicted family to work enrichment. For mothers, work to family conflict, family to work conflict and family to work enrichment were partially mediated by their own orientation towards career, while for fathers, career orientation only mediated the effect of attachment avoidance on work-family conflict.

Avoidantly attached individuals (mothers and fathers) appeared to experience more conflict between work and family due to a higher orientation to their professional role. Avoidantly attached mothers experienced less family to work enrichment due to this same orientation. Attachment anxiety was also found to predict both fathers and mothers levels of conflict between roles in the two directions, however none of these associations were mediated by the career orientation of the father or the mother. No interference between mothers' attachment orientation and fathers' levels of conflict and enrichment or vice-versa were found; nevertheless the data analyses technique used facilitated the ability to control for these effects.

These results lend further support to the claim that attachment orientations may be linked to functioning within the workplace. The further implications of these results will be discussed.

Factorial Validity and Reliability of the Multidimensional Scale Organizational Climate (EMCO).

Juana Patlan-Perez

UNAM-Mexico, Ciudad de México, Mexico

Introduction: Organizational climate is a variable that has been widely investigated in the last fifty years. Organizational climate is important because it has significant effects on the behaviour of workers.

Recently, in Mexico the measurement of organizational climate has been important for public and private companies, as well as being part of the process to obtain certifications. However, in Mexico there are only a few scales to measure organizational climate that are designed for the Mexican population and which consider the sociocultural aspects of this population.

In the present research, organizational climate is defined as the set of subjective and socially shared perceptions that workers have about the characteristics of the organization and the work environment. Respondents perceived attributes are assessed at three levels: individual (individual attributes), interpersonal (attributes of the relation worker-work environment) and organizational (organizational attributes, labour and the environment).

These perceptions influence and come to determine the behaviour and performance of the worker in the organization. The EMCO was developed by Gomez and Vicario (2010) in five stages: a) by reviewing the literature for the identification and definition of each factor (8 factors), b) by determining the psychological significance of each factor by using natural semantic networks (Reyes, 1993), c) by analysing the results obtained in the networks and comparing them with the theoretical elements identified in the literature, d) by the development of the item bank, and e) the construction of the scale.

The EMCO has eight factors at three levels and 29 items: a) Individual level: worker satisfaction and autonomy at work, b) Interpersonal level: Union and support, and social relations between co-workers, and c) Organizational level: Consideration of managers, benefits and rewards, motivation and effort, and leadership managers.

Objective: The objective of this research was to determine the psychometric properties of the Multidimensional Scale Organizational Climate (EMCO) designed by Gomez & Vicario (2009) using natural semantic networks.

Method: This scale was applied to a sample of 673 workers of a health institution. The results showed adequate levels of reliability (Cronbach's alpha $>.70$), construct validity (using factor analysis and structural equation analysis with AMOS software) and concurrent validity (i.e. a significant relationship between burnout and organizational climate).

Results: The results indicate that the EMCO is an effective scale to measure the organizational climate and for future research.

Personality Traits and Burnout in Secondary School Teachers.

Santiago De Ossorno García, Estela Montejo Martín, Rosario Martínez Arias, Javier Martín Babarro
University Complutense, Madrid, Spain

Several studies have found a significant relationship between personality traits and burnout syndrome (Burisch 2002; Teven 2007; Rudow 1999). The present research aims to analyse the relationship between these personality variables and burnout syndrome in secondary school teachers.

A sample of teachers ($n= 566$, 52 % women) from 52 schools in Madrid, Spain were surveyed. Through using the Maslach Burnout inventory (Educational Survey) three dimensions of burnout: emotional exhaustion, depersonalization and personal accomplishment, were measured. With regards to personality traits, the Big Five Inventory was used to measure openness, conscientiousness, extraversion, agreeableness and neuroticism.

The findings showed various significant results between the two sets of variables. In accordance with previous studies (e.g. Burisch, 2002) emotional exhaustion correlated positively with neuroticism. Personal accomplishment was the only dimension that correlated with the five factors of personality, as previously proposed by Moran (2005). Personal accomplishment was positively related to openness, conscientiousness, extraversion and agreeableness and negatively related to neuroticism. Depersonalisation showed a positive association with neuroticism, which again has been found in prior research (e.g. Burisch 2002; Moran 2005; Teven, 2007). Depersonalisation also negatively correlated with openness and with agreeableness which is in accordance with the results obtained by Mills et al. (1998).

Finally, depersonalisation was found to be negatively related to extraversion and conscientiousness, a result that has not been found in the preceding literature reviewed. In line with Kokkinos' (2007) finding neuroticism was the only factor that correlated with the three dimensions of the MBI; it correlated positively with emotional exhaustion, and depersonalisation, and it correlated negatively with personal accomplishment.

Time Lags in Panel Studies on Psychosocial Factors and Stressor-Strain Relationships at Work.

Bart Van de Ven¹, Christian Dormann²

¹*Ghent University, Ghent, Belgium,* ²*Johannes Gutenberg-Universität Mainz, Mainz, Germany*

The present study focuses on time lags in panel studies by investigating psychosocial factors and stressor-strain relationships.

Firstly, based on the work by Frese and Zapf (1988), a framework of the theoretical reasons for choosing specific time lags is provided. . Although this theoretical framework provides a clear rationale for time intervals, researchers are frequently mistaken by using it to derive appropriate time lags.

Secondly, an overview of other theoretical, methodological, and practical reasons, found in the literature, is provided; with numerous reasons for choosing time lags found and categorised as: related to the construct; operationalisations; mechanisms; method; epistemology; or, to the researcher. Further elaboration on this topic in research papers is crucial in order to expand knowledge on the effects of time on stressor-strain relationships.

Thirdly, this research advocates for a much-needed taxonomy on different time lags. It suggests the use of the terms “immediate”, “short-term”, “mid-term”, “meso-term”, “long-term”, and “grand-term” stress-reactions in order to describe time lags used in different studies in a more nuanced way. Applying the taxonomies and overviews in this study will help researchers to justify the choice of using shorter and longer time lags.

Do Emotional Labour, Organizational Variables and Wellbeing Predict Tenure in the Service Industry?

Alia Al Serkal

du (Emirates Integrated Telecommunication Company), Dubai, United Arab Emirates

Emotional Labour is a term first coined by Hochschild (1983). Since then, numerous studies have been conducted, but few have examined emotional labour, organizational variables, wellbeing and tenure. This study attempted to investigate if emotional labour and organizational variables predict tenure in the service industry.

A questionnaire, which included measures of; emotional labour, organizational factors, the experience of physical symptoms, and the General Health Questionnaire was administered to cabin crew working in a multicultural airline (n= 68). The study was cross sectional in nature. The average age of the sample was 27.53 years (SD: 3.42). 79% of the participants were female, and 71% came from collectivist cultures. Two years later, the cabin crew were traced in order to see how many were still working in the organization.

23% of the participants were found to have resigned from the traceable sample (n= 52), 33% of whom were labelled as cases on the GHQ. Individuals who perceived themselves as having higher levels of feedback were still employed within the same company. The results showed that participants who resigned were experiencing more role conflict, and more physical symptoms when measured two years earlier.

Emotional labour variables did not yield any significant results, but organizational and wellbeing variables did. Also, culture may play a role, as a significantly higher amount of participants from individualist cultures resigned from their job. This finding could be because the cabin crew role requires team interaction, which would be in line with collectivist cultures (Hofstede, 1983), or the experience of emotional dissonance. These possible explanations require further attention in future research.

Factors Associated with Job Lock in a National Survey of Older Workers in the U.S.

James Grosch

NIOSH/CDC, Cincinnati, OH, USA

Introduction: As the workforce in the U.S. and other developed countries continues to age, concerns have grown over the phenomenon of “job lock,” a condition defined by an inability to leave a job due to financial or benefit needs (typically, money and health insurance). Despite initial findings that job lock is associated with poorer health and reduced job satisfaction (e.g., Benjamin et al, 2008), there is a need for national data on job lock so that overall prevalence rates can be established, and for additional research to explore the different factors associated with job lock.

Methods: Data from the 2008 Health and Retirement Study (HRS), a nationally representative longitudinal survey of approximately 20,000 older adults (51 years and older) in the U.S was used. For the 2008 wave, a psychosocial module was developed that contained the following two items measuring job lock: "Right now, would you like to leave work altogether, but plan to keep working because (a) You need the money?; or (b) You need health insurance? A "yes" or "no" response format was used. The psychosocial module was given to a randomly selected sub-sample of HRS respondents who were currently working (n= 1,745).

Results: Overall, 74.3% of respondents indicated that they were job locked because of money, 53.5% because of health insurance, and 49.7% because of both money and health insurance. Only 26.0% of respondents indicated that neither money nor health insurance was preventing them from leaving work. Both types of job lock were more prevalent among women, African American and Latino respondents, and less educated older workers. Age displayed a negative relationship with job lock. Respondents reporting either type of job lock experienced higher levels of job demands and job dissatisfaction, and lower levels of autonomy, supervisor support, and perceptions of fair treatment. Job lock was also negatively associated with health (e.g. lower general health, higher number of chronic health conditions).

Discussion: These findings indicate that job lock is experienced by a large percentage of older workers in the U.S., with job lock because of money more common than job lock because of health insurance. Relationships between job lock and other variables were consistent with those reported in previous studies. Additional analyses are currently in progress to examine how the two types of job lock differ, and to identify the workplace factors which may moderate the relationship between job lock and health.

The Role of Employees' Parents in Work-Family Balance: A Study with Taiwanese Employees.

Chih-Ying Wu¹, Amanda Griffiths¹, Thomas Cox²

¹University of Nottingham, Nottingham, UK, ²Birkbeck University of London, London, UK

There is much research into the antecedents and consequences of work-family conflict and facilitation. However, the majority has been conducted in North America and Western Europe where family is defined as 'nuclear', involving an employee's partner and children. Other family members are absent in this traditional western definition. In the East, parents are regarded as highly influential family members especially in Chinese societies. In addition, the dominant religion, Confucianism, emphasises caring for older people.

Researchers have begun to explore work-family conflict and facilitation within non-traditional family frameworks. The present study aimed to explore this issue in a Chinese society, Taiwan, by focussing on the impact of employees' parents on work-family conflict and facilitation. This study used the common concepts of 'support' and 'demand' to refer to support received from/demands made by employees' parents.

Data were obtained from the nationwide Taiwan Social Change Survey (TSCS). Data from 801 participants (55% male, 45% female, 37% single, mean age 38 years) were analysed using Pearson correlations and hierarchical multiple regression.

Results revealed several significant associations between parental influences and work-family conflict/facilitation. Parents' emotional support had a positive influence on family to work facilitation ($\beta = 0.11$, $p < 0.05$) and a negative influence on family to work conflict ($\beta = -0.09$, $p < 0.05$). However, parents' instrumental support had no significant influence on any work-family interactions. Parents emotional demands had significant positive influences on family to work conflict ($\beta = 0.15$, $p < 0.01$), work to family facilitation ($\beta = 0.11$, $p < 0.05$), and family to work facilitation ($\beta = 0.16$, $p < 0.01$). However, parents' instrumental demands had no significant influences. The relationships between work-family interactions and other outcomes such as job satisfaction and family satisfaction were also analysed and are discussed.

The results of the present study highlight the important role of Taiwanese employees' parents in relation to their children's perceptions of work-family conflict and facilitation. The research model that was developed suggested that emotional support and emotional demands are influential. As expected, employees who reported more emotional support from their parents reported better work family balance. Interestingly, employees who received more emotional demands from their parents not only reported more family-work conflict, but also more family-work facilitation and work-family facilitation. These results could provide HR managers with better evidence with which to frame family-friendly policies in Taiwanese companies and organizations.

Does Ethical Organizational Culture Associate with Self-Reported Sickness Absences? A Finnish Public Sector Study.

Maiju Kangas, Mari Huhtala, Taru Feldt
University of Jyväskylä, Jyväskylä, Finland

Objective: The main aim of the present study was to examine whether the evaluations of ethical organizational culture (and its eight dimensions) were associated with self-reported sickness absences in a Finnish public sector organization. The underlying assumption is that the more ethical values and practices are present in the organization, the less there are self-reported sickness absences.

Methodology: The data consisted of 3,308 employees from the public sector city organization. Ethical culture of the organization was operationalised using the Corporate Ethical Virtues scale with 58 items (Kaptein, 2008) covering eight virtues: Clarity, Congruency of Supervisors, Congruency of Senior Management, Feasibility, Supportability, Transparency, Discussability, and Sanctionability. Self-reported sickness absences during the past 12 months were treated as a continuous variable. A linear regression analysis was conducted to examine how ethical organizational culture was related to the prevalence of sickness absences.

Results: The results showed that different dimensions of ethical organizational culture (virtues) had a significant positive association with low levels of sickness absences after controlling for the effects of background factors and long-term sicknesses. Higher evaluations of the virtues of Congruency of Supervisors, Congruency of Senior Management, Feasibility, Supportability, Discussability, and Sanctionability were associated with lower reported sickness absences.

What Keeps Work Unit Innovative In Organizational Change in Social and Health Care?

Timo Sinervo¹, Johanna Heikkilä², Sami Jantunen⁵, Merja Sankelo³, Jukka Piippo⁴, Asta Suomi²

¹*National Institute of Health and Welfare, THL, Helsinki, Finland,* ²*JAMK University of Applied Sciences, Jyväskylä, Finland,* ³*Seinäjoki University of Applied Sciences, Seinäjoki, Finland,* ⁴*Arcada University of Applied Sciences, Helsinki, Finland,* ⁵*Lappeenranta University of Technology, Lappeenranta, Finland*

Major organizational changes are widely used in developing services in social and health care. Changing organizational structures does not automatically lead to more efficient service production. As changes create uncertainty and stress, innovativeness may even decrease. Some organizations maintain their innovativeness during organizational changes and it's important to find out what factors explain this.

This study explored the psychosocial factors relating to innovativeness of work units (as innovative practices and outcomes). Support from supervisors for innovative behaviour, organizational justice, shared goals at units, job control, trust on top management were studied as psychosocial factors, and innovative behaviour of workers was studied as a control variable.

This paper is based on data from personnel surveys (n= 1,892 employees) in six social and health care organizations. All of the organizations had undergone major organizational changes, but all the employees were not involved in these changes. In the survey participants evaluated innovativeness of their work unit, their own innovative behaviour as well as psychosocial factors at work. They also gave information of organizational changes in their organization. Supervisors and management were excluded from the analyses. The survey is a part of a larger Osuva-study where four action studies and this survey are combined in a multicentre study. The aim of the study is to search new methods to manage and lead the collaborative innovation process, which would enable the greater participation of personnel, clients and service providers. The data were analysed using general linear models.

The analysis showed that organizational change had an effect on innovativeness of work units, but when the psychosocial factors were entered in the model this effect disappeared. All the psychosocial factors were associated to the innovativeness of the work unit. The effects of support from supervisors, shared goals and organizational justice were found to be the strongest.

The study showed that although organizational change may have negative effects on innovativeness, innovativeness can be supported by management practices, well-functioning teams and job control.



POSTERS

Workstyle and Musculoskeletal Problems in White Water Raft Guides

Hilary McDermott, [Iain Wilson](#), Fehmidah Munir
Loughborough University, Loughborough, UK

Background: Work-related musculoskeletal disorders (WRMSDs) are the most frequent type of reported work-related ill-health in the European Union and are common among those workers who perform tasks where there is exposure to forces on the body, repetition of movement and where the physical workload is high. Psychosocial factors, such as workstyle, can interact with physical risk factors to exacerbate the development of work-related MSDs. White water rafting involves using an inflatable raft to negotiate fast flowing rivers or other bodies of white water. Due to the physical forces and repetitive movements associated with white water rafting those who guide such activities may be at risk of incurring a work-related musculoskeletal complaint. Despite the demanding nature of the task and exposure to extreme physical forces experienced by those working as white water raft guides there has been no empirical investigation of the effects of these factors on the health and well-being of this specialised occupational group.

Method: Semi-structured interviews were conducted with 19 white water raft guides to obtain self-reported data on workstyle and occupational health. The interviews were recorded and fully transcribed. The data were analysed using inductive thematic analysis.

Results: All 19 participants reported experiencing at least one musculoskeletal problem in the twelve months prior to interview, 14 of whom were prevented from performing daily activities due to the associated pain. Long-term back trouble was identified as a common problem within the industry with unilateral guiding (guiding on one side) being identified as a known risk factor for the over-development of muscle sets and twisting of the spine. Despite this being a known risk factor, interviewees reported high work commitment and persisted in unilateral guiding for perfectionism and to meet the demands of the role.

Conclusion: These findings have identified that those working as white water raft guides are at risk of developing a WRMSD. The study has also demonstrated how workstyle can play a role in the development, exacerbation and maintenance of musculoskeletal symptoms among this specialised occupational group. The outdoor industry is a growth area and the findings are relevant to other outdoor activities where the cumulative effects of work intensity and work commitment may have adverse consequences for health.

Does Physical Activity Have an Impact on Sickness Absence? A systematic review

Neha Amlani, [Fehmidah Munir](#)
Loughborough University, Leicestershire, UK

Background: Increasing levels of physical activity are proven to have a positive impact on physical health and mental well-being. Physical activity is also known to influence work-related outcomes such as reducing sickness absence. Sickness absence is a major public health problem with wide economic impact on society and there may be much to gain from physical activity interventions aimed at preventing long-term sickness absence. Examining the relationship between physical activity and sickness absence is therefore important as it may provide benefits to organizations globally.

Method: This study provides a systematic review of the evidence on the relationship between physical activity and sickness absence among employees. A search of databases (Web of Science, ScienceDirect, Medline and Google Scholar) and references of published studies (from inception to 14th November 2012) were conducted to identify intervention studies and observational studies involving employees. A total of 34 studies published between 1981 and 2012 met the inclusion criteria.

Results: Evidence from a wide variety of studies showed an overall positive association between physical activity and sickness absence. However, randomized controlled trials provided mixed results as to whether physical activity interventions were effective at reducing absenteeism.

Conclusions: More longitudinal studies and randomised controlled trials are required to examine the relationship between physical activity and sickness absence. Research should also focus on examining the intensity of physical activity which can best reduce sickness absence.

Psychosocial Hazards and Wellbeing in Prison Educators

Gail Kinman¹, Siobhan Wray²

¹University of Bedfordshire, Bedfordshire, UK, ²Sheffield Hallam, Sheffield, UK

Previous research findings suggest that prison personnel report high levels of stressors and strains. Little is known, however, about the experiences of prison educators. This study examined the extent to which prison education departments in the UK meet the minimum standards stipulated by the Health and Safety Executive (HSE) for the management of work-related stress. Overall levels of wellbeing related to specific psychosocial hazards (i.e. job demands, control, support from managers and colleagues, role, relationships and change) were compared with HSE recommended benchmarks. It has been suggested that examining relationships between the HSE hazard categories and measures of strain can determine priorities for intervention (Bevan et al. 2010). Accordingly, this study explored associations between the seven psychosocial hazards and perceived stress and work-life conflict.

One hundred and eighty-seven prison educators (62% female) responded to an online survey that utilised the HSE management standards questionnaire (Cousins et al. 2004), a measure of work-life conflict (Fisher et al. 2009) and a single item measure of perceived work-related stress. For all of the hazard categories, respondents reported lower well-being than the published benchmarks. The greatest disparity related to change management, relationships, role clarity and management support. Significant negative relationships were found between all hazard categories and both perceived work-related stress and work-life conflict. Multiple regression equations were computed to examine the hazard categories which were the strongest predictors of perceived stress and work-life conflict. Together, the seven hazard categories predicted 69% of variance in perceived stress with significant contributions made by demands and relationships only. Forty-eight percent of the variance in work-life conflict was accounted for by the hazard categories; again demands and relationships were the only significant predictors of this outcome.

Although the prison education sector does not meet any of the HSE minimum standards for the management of work-related stress, priority should be given to reducing work demands and enhancing the quality of working relationships. The importance of managing workplace relationships more effectively is emphasised by the finding that only 32% of participants indicated that they were never subjected to bullying at work and only 22% indicated that they never experienced personal harassment. Future research should examine the job-specific hazards that are experienced by prison educators and the impact on the wellbeing more broadly.

Construction Migrants' Labour Recruiter Payment, Health and Safety

Haitham Abdalla Hassan, Jonathan Houdmont

University of Nottingham, Nottingham, UK

Background: The Middle East construction sector is heavily reliant on a migrant workforce that predominantly originates from South Asia. It is common practice for construction migrants to pay a local labour recruiter equivalent to one or more years of their prospective overseas salary to secure employment, work and travel permits, and transportation. The occupational health and safety implications of these financial arrangements remain unexplored.

Aim: To examine associations between payment to a labour recruiter, perceived general health, and worksite accidents among construction migrants in the Middle-East.

Method: A questionnaire was completed by a convenience sample of predominantly Indian construction migrants ($N = 651$) drawn from a large construction project. The relationship between payment and risk of poor health and worksite accidents was measured by ORs and 95% CIs using multivariate logistic regression models (crude and adjusted for socio-demographic factors).

Results: The majority (58%) of construction migrants had paid a labour recruiter; approximately two fifths had experienced a worksite accident. Between 3.2% (labourers) and 9.3% (foremen) perceived their health to be poor. Labourers (Adjusted OR, 3.24; 1.63-6.47) and skilled workers (Adjusted OR, 2.36; 1.45-3.85) who had paid a labour recruiter were more likely to have experienced a worksite accident in the previous 12 months. Payment to a labour recruiter was not associated with increased risk of poor health.

Conclusions: These findings suggest that the mechanisms linking labour recruiter payment to safety warrant investigation with a view toward the development of interventions designed to erode the linkages.

Blue Monday and Sweet Thursday: A Study of employees' Workweek Mood and Time Allocation to Leisure Activities

Julie Menard^{1,2}, Paul E. Flaxman², Annie Foucreault¹

¹University of Quebec at Montreal, Montreal, Qc, Canada, ²City University, London, UK

The relationship between weekday, time allocation and daily respite could deepen our understanding of workers' respite across the workweek. Previous studies on leisure activities respite (e.g. Van Hoof et al., 2011; Sonnentag & Zijlstra, 2006) have not accounted for day of the week in their research design, but some studies (Areni, 2008; Clark & Watson, 1988, Ryan et al., 2010) suggest a 'day of the week' effect on mood.

In order to study workweek days mood variation amongst workers and to identify time allocation to leisure activities that leads to respite moods, a sample of 95 employees completed diaries from Monday to Thursday evening at bedtime. Since we focused on workweek mood, weekend day (i.e. Saturday and Sunday) and anticipatory day (i.e. Friday) were not assessed in our study.

Results indicate that employees partly experienced a weekend anticipation effect on Thursday; hence, their anxiety reached a nadir on Thursday evening. The blue-Monday phenomenon was also observed through higher anxiety, fatigue and negative emotions on Monday evening than on any other day of the workweek. Positive emotions were quite stable through the workweek. Data revealed that those who spent more time performing physical activities during the workweek felt less fatigued, anxious and reported more positive emotions. Those who spent more time exercising were particularly less anxious and reported more positive emotions on Monday evening. Performing social activities also was related to a decrease in anxiety and was associated to lower levels of negative emotions and higher positive emotions across the workweek. Allocating more time to social activities was related to less negative emotions on Monday evening. Also, spending more time on low-effort activities was associated to less positive emotions across the workweek but to decreased fatigue on Monday evening.

These findings support the view that workers' mood changes according to the day of the week and that various choices of leisure-time activities lead to different mood outcomes. Results suggest that employee wanting to improve respite from work could benefit from wisely allocating their leisure time to replenishing activities. Also, worksite interventions that focus on providing opportunities for employees to participate in social and physical activities at work should be considered by organizations.

Examining Occupational Stress Levels in Flight attendants

Akram Vaferi, Anita Baghdassarians, Mojgan Mansouri

¹*Islamic Azyad Universit, Central Tehran Branch* Social worker at the Islamic Republic of Iran's airline, Homa, Tehran, Iran, ²*Islamic Azad University, Central Tehran Branch, Tehran, Iran,*

³*Islamic Azad University, Central Tehran Branch, Tehran, Iran*

Introduction: Since one third of people's working life is spent at the work place, working conditions including physical environment, social relations and interaction among colleagues can be important sources of stress, which in turn can influence a person's physical and mental health. From among different occupations, cabin crew specially flight attendants were chosen for this study because they have the responsibility for the lives of passengers in emergency situations, and are in direct contact with the pilot who has the responsibility for the flight. Precision, focus and calmness, as well as velocity and making the right decisions in special situations are important factors in their job.

Method: By using stratified random sampling, a total of 257 flight attendants working for Homa airline were selected and the Paul Dier's test was administered to measure their occupational stress level. The data were then analysed at the levels of descriptive statistics and inferential analysis by the two-factor analysis of variance.

Results: The study has concluded that there are meaningful differences between more than average occupational stress levels among men and women, those who are single and married, employees with less and more than ten years of work experience, and those with different levels of education.

Does Need for Concentration Modify the Effect of Office Type on Health and Productivity?

Aram Seddigh¹, Christina Bodin Danielson¹, Erik Berntsson², Hugo Westerlund¹

¹*The stress Research Institute, Stockholm University, Stockholm, Sweden,* ²*The Department of Psychology, Stockholm University, Stockholm, Sweden*

Studies of the impact on health and productivity of different types of office environments usually compare cell offices with open-plan offices. This paper investigates the interaction between need for concentration on the job and six more specific office types (cell office, shared-room office, small open-plan office, medium-sized open-plan office, large open-plan office and flex office) in relation to measures of health and productivity.

A 2x6 between-subject multivariate analysis of covariance was conducted on the dependent variables distraction, cognitive stress, emotional exhaustion, depersonalization, personal efficiency and general health while controlling for age, educational level, gender and sector of the labourmarket. The independent variables were need for concentration (two categories) and office type (six categories). 1,241 employees from five organizations, both in the private and public sectors, participated in the study.

Cell offices were associated with lower reported levels of distraction and cognitive stress, and flex offices with lower distraction, among the employees compared with all other open-plan office types. However, there were no significant differences in the outcome variables between different types of open-plan offices. There was an interaction between office type and the need for concentration for the job; employees in the high need for concentration group reported more distraction in all office types except in cell offices and also more cognitive stress in all office types except cell offices and flex offices.

This study suggests the presence of negative health and productivity aspects in individuals working in open-plan offices. This seems especially true for those who have tasks that require

a high need for concentration. In order to prevent poor health and lost of productivity, organizations working in similar office types should have an action plan in order to lower the amount of distraction and cognitive stress prevalent in open-plan offices.

Daily Antecedents of State Work Engagement and their Associations with Mental Health

Dorota Reis¹, Annkatrin Hoppe²

¹*University of Koblenz-Landau, Landau, Germany,* ²*Humboldt University Berlin, Berlin, Germany*

Aim: The aim of this diary study was two-fold: First to examine the within-person relations between positive activation (i.e., a state reflecting high levels of pleasure and high levels of arousal), optimism, and state work engagement throughout the day. Second, to investigate whether mental health (i.e., well-being, sleep quality, and self-rated health) influences the average levels of these relations.

Method: Daily survey data were gathered over the course of three consecutive working days with two measurement occasions per day. Data from 85 employees from different occupations (65% female, mean age 38.7 (±18.9) years) were analysed with hierarchical linear modelling.

Results: As predicted, positive activation enhanced daily work engagement, whereas optimism did not. In addition, well-being was the only mental health component that affected the levels of positive activation and optimism experienced in the morning as well as the levels of work engagement experienced in the evening.

Conclusion: This study adds to research on the antecedents of state work engagement by showing that mental health does not affect processes that determine daily work engagement.

Interventions in Academia – Supporting and Challenging Factors

Christine Ipsen¹, Vibeke Andersen², Mirjam Godskesen²

¹*Technical University of Denmark, Department of Management Engineering, Kgs. Lyngby, Denmark,* ²*Aalborg University, Department of Learning and Philosophy, Copenhagen, Denmark*

This paper presents the result of a participatory self-help intervention model applied at a department at the Faculty of Humanities at Copenhagen University with the aim to initiate a change process focusing on the tasks at work which create enthusiasm and strain. The aim of the research study was to identify how new work structures can be developed in academia in a participatory process and what supports and challenge the process.

A multi-level participatory intervention model (PoWRS) targets the work (primary interventions) rather than the employees. In a collective process two organizational-level changes are decided upon and implemented in a multi-level participatory process facilitated by a small project group including two facilitators. Being a qualitative mixed-methods research project the research team studied the process by applying surveys, semi-structured interviews, observations during the collective activities at the department and Chronicle Workshops in order to obtain data during, and at the end, of the intervention. Besides, an experienced coach and researcher coached selected groups and individual researchers during the intervention.

In the faculty intervention two organizational-level changes were identified at the initial FishBone Workshop; *“More time to immerse in research field”* and *“More cooperation among faculty members”*. The intervention resulted in a number of new initiatives such as email free mornings, writing weeks without teaching obligations, monthly lunch meetings with faculty and as derived effects the participants experienced: Increased knowledge about colleagues, broadened department network and continuous time to write and submit articles.

Initially resistance was expected by head of department and the research team. However, the employees saw the intervention as an opportunity to break with research solitude and create more openness about research and teaching. The Chronicle Workshop showed that the following conditions had supported the changes: supportive head of department, facilitators' commitment and dedication, legitimization of open discussion about problematic issues and the collective process. The challenges were the department's relocation, lack of support from colleagues, deadlines, bibliometrics, external bureaucratic publication and funding demands, lack of vision and experience with other work practices.

Besides respondents statements the preliminary analysis shows that the distributed location of the employees' offices and the individualized work practice, both stand in the way of new collective work forms. The study also illustrates how new structures in academia can be established, preserving the research freedom and at the same time make sure that the objectives are reached.

Work Ability and Work-Related Stress: A Cross-sectional Study of Obstetrical Nurses in Urban North-eastern Ontario

Behdin Nowrouzi¹, Nancy Lightfoot², Lorraine Carter⁴, Michel Larivière³, Ellen Rukholm⁵, Robert Schinke³, Diane Belanger-Gardner⁶, Basem Goltar¹

¹Laurentian University, Sudbury, ON Canada, ²Schools of Rural and Northern Health, Social Work, Nursing, and Northern Ontario School of Medicine, Laurentian University, Sudbury, ON, Canada, ³School of Human Kinetics, Laurentian University, Sudbury, ON, Canada, ⁴Centre for Flexible Teaching and Learning, Nipissing University, North Bay, ON, Canada, ⁵Centre for Rural and Northern and Health Research, Laurentian University, Sudbury, ON, Canada, ⁶Health Sciences North, Sudbury, ON, Canada

Background: The aim of this study was to determine: 1) if quality of work life (QWL), location of cross-training, stress variables, and various demographic factors in nurses are associated with work ability, and 2) nursing occupational stress, QWL, and various related factors are associated with nurses' work ability.

Methods: This cross sectional study was conducted in 2012 in four hospitals in north-eastern Ontario (Health Sciences North, North Bay Regional Health Centre, Sault Area Hospital, and Timmins and District Hospital in Ontario, Canada). A stratified random sample of registered nurses (n=111) were selected from the total number of 138 registered nurses on staff in the labour, delivery, recovery, and postpartum areas. Two separate multiple regressions considered whether 1) demographic and related factors (e.g., age, ethnicity, gender, marital status, and nursing experience) were associated with work ability, and 2) stress and quality of work life variables (e.g., QWL scores, total stress scores, home-work support, and mean number of patients per shift) were associated with work ability.

Results: In total, 111 nurses completed the survey (80.4% response rate). The majority of participants were female (94.6%) ranging in age from 24 to 64 years (mean= 41.9, s.d. =10.2). No significant regression equation was found for the demographics model (p=0.15), with an R² of 0.111. For the stress and QWL model, one variable: QWL (home-work support) (p=0.015), cross-trained nurses (p=0.048), and having more than 4 patients per shift (p=0.024) significantly contributed to the variance in work ability scores. In the logistic regression model, the odds of a higher work ability for nurses who received home-work support were estimated to be 1.32 (95% CI, 1.06 to 1.66) times the odds of a higher work ability for nurses who did not receive home-work support.

Conclusions: Work ability in the occupational health and work environment of obstetrical nursing is important. To be high functioning, workplaces should maximize the use of their employees' actual and potential skills. Organizations in healthcare are introducing new forms of work and organizational design, as well as changes in the delivery of care. Educational and career prospects may mitigate nurses' occupational stress levels.

Development of a Screening Tool for Predicting Non-specific Neck Pain in Office Workers: A 1-Year Prospective Cohort Study

Arpalak Paksaichol, Prawit Janwantanakul, Praneet Pensri

Work-related Musculoskeletal Research Unit, Department of Physical Therapy, Faculty of Allied Health Sciences, Chulalongkorn University, Bangkok, Thailand

Introduction: Neck pain is common among office workers (Hush et al., 2009). Evidence suggests that neck pain in workers is non-traumatic and assumed to be of multi-factorial origin (Côté et al., 2009). To our knowledge; no screening tool to identify office workers at risk of developing neck pain has been established.

Purpose: The present study aimed to develop a risk score to identify office workers who are risk of developing non-specific neck pain with high disability level.

Materials and Methods: A prospective cohort study of 559 office workers aged between 18-59 years from 4 public sectors in Bangkok was conducted. Office workers were included if they were free from neck pain in the previous 3 months. Participants were excluded if they reported pain on the neck more than 3 from 10 on a visual analogue scale, were pregnant or had a history of spinal surgery, trauma, or accidents. Participants who had been diagnosed with congenital anomaly of the spine, rheumatoid arthritis, infection of the spine and discs, ankylosing spondylitis, lumbar spondylolisthesis, lumbar spondylosis, tumor, systemic lupus erythematosus, or osteoporosis were also excluded from the study. Questionnaires and physical examination were used to assess exposure to risk factors and musculoskeletal symptoms. Biopsychosocial risk factors were assessed at baseline in those free from non-specific neck pain. Subjects were followed-up for 12 months to determine those who developed new-onset neck pain. Binary and multiple logistic regression with backward stepwise selection analyses were performed to determine the optimal combination of risk factors needed to predict non-specific neck pain. The coefficients from the binary logistic regression were transformed into the components of a risk score. A receiver-operating characteristic curve (ROC) and the area under the ROC were produced to evaluate the discriminatory ability of the risk score.

Results and Discussions: Data analysis is currently underway and the results, discussion and conclusion will be presented at the conference.

Physical and Psychological Determinants of Workplace Injuries: A Study of Forest Firefighters in Ontario, Canada

Michel Larivière^{1,2}, Caleb Leduc^{1,2}, Hilary Gordon^{1,2}

¹Laurentian University, Sudbury, Ontario, Canada, ²Centre for Research in Occupational Safety & Health, Sudbury, Ontario, Canada

The Ontario Ministry of Natural Resources (OMNR) Aviation, Forest Fire and Emergency Services (AFFES) employs close to 800 forest firefighters who are stationed at 20 bases across the Canadian Province of Ontario during the fire season. Each season, these workers are faced with physical and psychological challenges as a result of their job duties. In Ontario, the Workplace Safety Insurance Board (WSIB) is an employer-funded agency, legislated by the government to administer the Workplace Safety and Insurance Act. Employers contribute a premium for each employee in return for no-fault liability workplace insurance while employees covered under this system receive in return, compensation and benefits for accepted claims. The OMNR AFFES records detailed information regarding two types of workplace injury: less severe first aid injuries and WSIB claimed injuries. These two categories of injury are mutually exclusive; any injury sustained by a worker is recorded as one of the two.

A comprehensive literature review identified age, gender, fitness, a history of injury, worker experience, job stress, and personality traits as relevant covariates of injury in physically demanding occupations. The present study is the first to identify the contributions of physical and psychological factors on the likelihood injury among forest firefighters. Male and female forest firefighters employed by the OMNR, aged between 18 and 65 years participated in the current study (N=252). Data were collected using two self-administered instruments at each of the OMNR's 20 fire bases across the Province of Ontario: The NEO Personality Inventory and the Job Stress Survey. Secondary data were collected from the OMNR, and data were analyzed by way of various multivariate techniques, using SPSS 20.0.

It was found that workers who were older, had a history of injury, and scored high on the personality construct Neuroticism, and/or low on the Openness construct were significantly more likely to incur a first aid injury. In addition, high job stress was a significant predictor of WSIB injury. This study suggests that first aid and WSIB injuries in this organization are quite distinct phenomena, and that different factors need consideration in their prediction. It is recommended that managers and decision-makers in the field of forest firefighting consider factors such as job stress, personality, and the prior occurrence of injuries in their allocation of human and financial resources.

Predictors and Consequences of Presenteeism: A Qualitative Study of Nurses in Geriatric Settings

Luke Anthony Fiorini, Amanda Griffiths, Jonathan Houdmont
University of Nottingham, Nottingham, UK

Background: Presenteeism usually is conceptualised as going to work despite illness. European literature predominantly focuses on the antecedents of this behaviour whereas American literature is often more concerned with related productivity losses. Presenteeism, thought to be particularly prevalent in nursing, is associated with an increased risk of future illness and sickness absence, and is costly. When people are sick, absenteeism and presenteeism are alternative courses of actions. In addition to the nature of illness and its severity, quantitative studies have revealed that various additional physical, psychological, social and organizational factors regulate the choice between the two. The precise picture, however, is not yet clear as results are inconsistent. Qualitative studies suggest that individual factors such as personal motivation, self-image, and personality warrant exploration. Many studies fail to measure absence, presenteeism, their antecedents and consequences separately, rendering the correlates of each unclear. The theoretical underpinnings of this research are limited. Qualitative research, which might provide novel angles for further enquiry, has been infrequently used.

Research Question: What factors lead nurses to decide whether to attend or not attend work when ill?

Aims: (1) To determine factors that nurses consider foster presenteeism and absenteeism when ill. (2) To explore the perceived consequences of presenteeism and absenteeism.

Method: An exploratory, qualitative method will be used to investigate reported antecedents and consequences of presenteeism among nurses within a geriatric ward setting. Participants will be full time nurses working within short stay and long stay geriatric wards in Malta. Data will be collected via recorded semi-structured interviews with nurses in their usual place of work. These will last between 30–60 minutes. The research will employ an organizational and biopsychosocial perspective. Questions will focus on: attendance requirements; absence requirements; attendance incentives; absence incentives; and the perceived consequences of the choice between presenteeism and absenteeism. Health related and routine demographic data will be collected. Data collection and analysis will be completed by May and August 2014 respectively. Interviews will be transcribed and inputted into NVivo data management software. Thematic analysis will be employed.

Potential implications for research and practice: The study will contribute to the scientific literature and theoretical frameworks concerning absenteeism and presenteeism. Findings may also have practical implications for improving the occupational health and management of nurses.

Identifying Return to Work Predictors Among Individuals Obtaining Psychological Services

Caleb Leduc^{1,2}, Michel Larivière^{1,2}, Zsuzsanna Kerekes³, Danielle Valcheff¹

¹Laurentian University, Sudbury, Ontario, Canada, ²Centre for Research in Occupational Safety and Health, Sudbury, Ontario, Canada, ³University of Pecs, Pecs, Hungary

Mental health problems have particularly incapacitating effects on an individual's capacity to hold and maintain employment. Over half a million Canadians are absent from work due to mental health problems every day, costing Canadian companies 14% of their net annual profit. Individuals off work for mental health reasons often experience longer periods of absence, and return to work at a much lower rate than individuals absent for other reasons. Regrettably, empirically based return to work interventions focused on mental health problems are lacking; likely the result of a lack of consensus surrounding salient predictors of return to work. As a result, the current study sought to add to current literature aimed at identifying factors that influence the likelihood of successful re-entry into the workforce.

A review of patient files from a private psychological practice provided the sample. Potential participants were selected based on their satisfaction of two central criteria: 1) having experienced workplace absence and 2) suffering from a mood or anxiety disorder as classified by the *DSM-IV-TR*. Recruitment letters and consent forms were mailed to 74 eligible participants, and a response rate of 68% was obtained (n=50). The sample was predominantly female (n=38 or 76%). Of the 50 participants, 27 successfully reintegrated to the workforce (RTW=54%), following a mean absence of 13 months.

Salient findings emerging from the current study were the higher risk categories (e.g., physically injured workers, low educational requirements, disability providers) of reduced likelihood of successful return to work. The role of symptom severity and availability of social support is also discussed along with best practice implications for stakeholder/practitioners.

The Importance of Conducting Regular Safety Inspections in Small and Medium Size Enterprises

Behdin Nowrouzi¹, Basem Gohar¹, Behnam Nowrouzi-Kia², Martyna Garbaczewska², Olena Chapovalov³, Lorraine Carter¹, Michel Larivière¹

¹Laurentian University, Sudbury, Canada, ²University of Toronto, Toronto, Canada, ³Public Services Health & Safety Association, Toronto, Canada, ⁴Nipissing University, North Bay, Canada

Background: A considerable effort has been made to examine the health and safety of employees in large-sized enterprises. However, there has not been much attention given to the organization of work, occupational health and safety, and work disability prevention in small and medium enterprises (SME).

Aims: The purpose of our study is to examine facilitators and barriers to occupational health and safety among SMEs in Ontario.

Methods: A cross-sectional design was used to examine the occupational health and safety culture of small and medium sized enterprises from public and private sectors in Ontario. A convenience sample of employees from all position titles in Ontario organizations that ranged from 5 to 100 full-time equivalent employees, were invited via email to participate in the survey.

Results: A total of a 153 questionnaires were returned. Most of the respondents were female (84.2%) with a mean age of 49.8 years (SD=10.6). Multivariable logistic regression modelling revealed the odds of a safe work environment for SMEs who conducted regular safety inspections were estimated to be 2.88 (95% CI, 1.57-5.27) greater than the odds of a safe work environment for SME who did not conduct regular safety inspections.

Conclusions: This study profiled the work and safety among small and medium enterprises in Ontario. Moreover, better implementation and training strategies that focus on adapting occupational health and safety legislation to the nature and diversity of SMEs is warranted.

State Work Engagement, State Mood, and Their Associations with Time Pressure: An Ambulatory Assessment Study

*Charlotte Arndt, Dorota Reis, Tanja Lischetzke
University of Koblenz-Landau, Landau, Germany*

Background: Recent research on work engagement demonstrates that its dimensions fluctuate considerably within individuals. This within-person variation is partially due to variations of within-person predictors, such as daily job demands and resources or daily recovery. Although several studies confirmed well-investigated antecedents of trait work engagement as within-person predictors for state work engagement, the findings on within-person time pressure remain inconsistent with negative and positive associations reported. Thus, the aim of our study was to further investigate the daily relations between time pressure and vigor and dedication, respectively. In addition, due to the affective components of state work engagement, we intended to explore whether job characteristics such as time pressure and job control, affect state mood similarly to their respective effects on state work engagement.

Method: 52 full-time employees (41% women) completed a general survey and three daily surveys on smartphones over the course of two workweeks (Level 1 N = 1294).

Results: Results of multilevel analyses indicated that both vigor and dedication were positively associated with time pressure within individuals. However, the model assuming curvilinear relations fitted the data best with low and high time pressure predicting lower levels of state work engagement. In contrast, time pressure influenced mood negatively resulting in bad or tense mood states. Moreover, for the time pressure - mood relations we found linear effects only.

Conclusion: Our study adds to research by differentiating between state vigor, state dedication, and state mood. The central finding was that moderate levels of time pressure were related to higher work engagement demonstrating that time pressure to some extent might be perceived as a challenge.

Individual and Situational Factors as Risks and Deterrents of Perceived Exposure to Workplace Bullying

Milda Astrauskaite¹, Roy Max Kern², Guy Notelaers³

¹Kaunas University of Technology, Kaunas, Lithuania, ²Vytautas Magnus University, Kaunas, Lithuania, ³University of Bergen, Bergen, Norway

The negative consequences of workplace bullying have encouraged researchers to explore the individual and situational factors that may trigger or deter bullying in the workplace. Despite the increasing number of studies on the potential antecedents of workplace bullying, there is little evidence on the deterring role of various individual and situational factors. Besides, there is lack of empirical evidence related to the importance of individual and situational factors to explain workplace bullying. Thus, the main aim of the present study was to assess the relationships between individual and situational factors as potential risks and deterrents of exposure to workplace bullying and to identify the importance of these factors in explaining exposure to workplace bullying.

The Negative Acts Questionnaire-Revised was used to measure exposure to workplace bullying (Einarsen et al., 2009). Problem solving as conflict solving style was evaluated using one scale from the Dutch Test of Conflict Handling (De Dreu et al., 2001). Scales of pace and amount of work, independence in work, participation and opportunities to learn, representing situational factors were derived from the Short Inventory to Monitor Psychosocial Hazards (Notelaers et al., 2007). For the assessment of the two lifestyle themes of belonging/social interest and being cautious, Basic Adlerian Scales for Interpersonal Success Adult Form was used (Curllette et al., 1993). Transformational leadership style was evaluated using a Global Transformational Leadership scale (GTL; Carless et al., 2000).

The results demonstrated that belonging/social interest, problem solving, transformational leadership, participation, opportunities to learn, and independence at work were significant potential deterring factors for perceived exposure to workplace bullying. The being cautious lifestyle theme, pace and amount of work, and high strain circumstances were significant potential risk factors of workplace bullying. After inclusion of all the variables under investigation, only five factors remained significant. Transformational leadership and pace and amount of work made the largest unique contribution in explaining workplace bullying.

Relationships at work: A Brazilian perspective

Ana Maria Rossi

International Stress Management Association - ISMA-BR, Porto Alegre, RS, Brazil

The purpose of this study is to compare the perceptions of men and women from the five Brazilian regions regarding relationships at work as a way of reducing the impact of job stress based on the anxiety symptoms they experience, where the more efficient the relationships are, less anxiety symptoms are identified.

A sample of 1,600 professionals was selected from large companies in the five different Brazilian regions (south, southeast, mid-west, northeast and north). Participants were randomly chosen and participation was voluntary.

In order to identify the dimensions (factors) related to the 36 surveyed variables, factor analysis was performed, considering the main components method, Varimax rotation, explained 60% of the variance and factor loadings of greater than 0.45 emerged. Nine factors were identified: 3 of *experienced somatic anxiety* (ESA); 1 of *relationships with others at work* (REL); 2 of *experiences with your manager* (EXM) and 3 of *thinking about your manager* (THM). New variables equivalent to the factors were generated from the means of the variables that are part of each factor.

Analysis of variance (ANOVA) and multiple regression analysis were made considering the mean of the three anxiety factors as dependent variable (a factorial analysis confirmed this grouping) with the remaining studied factors as independent variables. Taking only significant differences into account, females have the highest means for ESA1, ESA2, REL1, EXM1 and THM1 and lower means for ESA3 and THM2. For the different regions, differences existed between the southeastern region (highest mean) and southern region (lowest mean) for ESA1; between the northern region (lowest mean) and the other regions for REL1; between the northern region (highest mean) and the northeastern region (lowest mean) for THM3; between the mid-west and southeastern regions (lowest means) and the southern and northern regions (highest means) for THM2. This relationship is the opposite regarding THM1.

In relation to regression, even with the low R^2 (0.11), significant negative betas were identified for REL1 (-0.19) and for EXM1 (-0.15) and positive beta for THM2 (0.09). Therefore, the results indicate that relationships and communication at the workplace may reduce stress/anxiety levels.

Assessing the Risk of Occupational Injury, Illness, & Disability: Creating a Meta-Analytically Informed Instrument for Lost-Time Injury Prediction in Nurses

Basem Gohar^{1,2}, Michel Larivière^{1,3,4}, Nancy Lightfoot^{1,2}, Céline Boudreau-Larivière^{1,3}, Caleb Leduc^{1,3}, & Behdin Nowrouzi^{1,4}

¹*Centre for Research in Occupational Safety & Health*, ²*School of Rural & Northern Health*, ³*School of Human Kinetics*, ⁴*Northern Ontario School of Medicine Laurentian University, Sudbury, Ontario, Canada*

Background: Predictive tools relating to the occurrence of lost-time due to workplace injury, illness and disability (IID) are scarcely mentioned in the occupational health literature. Such tools would be beneficial for several large occupational groups including nurses. Compared to other Canadian occupations, nurses are the sickest workers, averaging 15.8 sick days off work annually. This is especially alarming, as nurses have also reported low levels of job satisfaction and trends of nurse staffing shortages are increasing worldwide.

Objective: To translate extant scientific knowledge on the predictors of workplace injury, illness and disability among nurses by creating a psychometrically-valid instrument that could predict negative health occurrences.

Methods: The initial phase of the proposed research will consist of a meta-analysis to identify the correlates of workplace IID that lead to absenteeism among nurses. Demographic (e.g. age), physical (e.g. previous injury), psychosocial (e.g. mental health disorder), and occupational factors (e.g. overtime) are anticipated to be associated with IID. Second, using results from applied statistical calculations (e.g. effect sizes, odds ratios, confidence intervals); items to be included in a draft actuarial instrument will be operationalized. Third, results from the draft instrument will be validated via key informant interviews (e.g. occupational health specialists) in a series of focus groups to increase understanding of IID risks from the organizational perspective and add face validity to the instrument.

Hypothesis: Workplace IIDs are multifaceted and complex occurrences that are predictable within defined statistical parameters. IIDs are defined according to the Canadian Workplace Safety and Insurance Board's lost-time claims, which include absence post-accident date, loss of earning, or a permanent impairment.

Implications: The proposed research could fill gaps in the occupational health literature, and seeks to facilitate knowledge translation in a practical format to be used within applied health contexts globally.

Towards a Greater Understanding of the Influence of Psychopathology, Personality and Treatment Factors in the Return to Work Process for Employees Absent from the Workplace

Danielle Valcheff, Michel Lariviere, Caleb Leduc
Laurentian University, Sudbury, Ontario, Canada

Employees off work due to psychological concerns experience significant disruptions in their lives and often have difficulty reintegrating into the workplace. To date, research dedicated to the processes and factors contributing to an employee's successful return to work (RTW) following a disability has largely focused on physical disabilities.

The purpose of the current study was to explore group differences (N=44) between RTW and non-RTW employees absent due to a psychological disability on measures of psychopathology (e.g. depression, anxiety), personality (e.g. borderline) and treatment factors (e.g. resistance to treatment). Approximately three quarters of the sample was female, (76% female and 24% male). Participants were categorized into one of three occupational groups according to their employment: professionals (e.g., teachers, engineers), skilled workers (e.g.,

electricians, plumbers) and labourers (e.g., construction worker, cashier). Psychometric instruments used in the study consisted of the Personality Assessment Inventory (PAI) and the Millon Clinical Multiaxial Inventory-III (MCMI). Both the PAI and the MCMI successfully identified subscale differences between RTW and non-RTW employees. The somatization, depression, schizophrenia, and treatment resistance subscales on the PAI, as well as the thought disorder and bi-polar subscales on the MCMI, demonstrated significant group differences between RTW and non-RTW employees.

It was found that higher scores on the significant clinical subscales predicted against a successful workplace reintegration. However, no differences were found on validity scales or axis II (personality) scales between those who successfully returned to work following treatment and those who did not. Interestingly, lower treatment resistance scores on the PAI predicted against a successful RTW, which may be explained by higher levels of distress among those least resistant to treatment. There appears to be a critical point on the continuum of treatment resistance that practitioners may counter intuitively need to consider when providing psychological services and preparing individuals for a successful return to work.

Feasibility and Preliminary Outcomes of a Brief Mindfulness-Based Resilience Training Program for Human Service Professionals.

Aileen Pidgeon¹, Lenard Pidgeon², Amelia-Rose Read¹, Frances Klaassen³

¹*Bond University, Robina, Australia*, ²*Mindful Awareness Psychology Services, Varsity Lakes, Australia*, ³*Merci Family Services, Toowoomba, Australia*

Despite the abundance of literature on the characteristics of resilience, there is little research on interventions that promote resilience in adults within a workplace setting. This paper reports findings from a pilot randomized controlled trial assessing the feasibility, acceptability, and preliminary outcomes of a brief mindfulness-based resilience skills training program (Mindful Awareness and Resilience Skills Training, MARST) for human service professionals. The program targets core aspects of mindfulness, resilience, and social-emotional wellbeing.

The aims of this study were to gather preliminary information regarding the feasibility of implementing a group mindfulness-based resilience-training program for human services professional workers, and to assess if the program would potentially promote mindful awareness, resilience, and social-emotional well-being and reduce non-resilient thinking styles.

Resilience enhancement strategies incorporate cognitive behavioural therapy (CBT) and processes of mindfulness-based therapy including compassion meditation exercises. Sessions involve psycho-education, discussions, experiential exercises, and home activities.

Twenty-two participants completed the 2 x 6 hour group sessions over 2 weeks. Baseline and post-intervention assessment included self-administered questionnaires, and intervention evaluation measures. Data were analysed using repeated measures analysis of variance and illustrated a significant improvement between baseline and post intervention scores on measures of resilience ($p = 0.008$), mindfulness ($p < 0.001$), non-resilient thinking styles ($p = 0.001$) and positive emotions ($p = 0.02$).

Negative emotions were not significantly reduced, however trended in the hypothesized direction ($p = 0.093$). Participants also rated the program delivery and content very highly and reported completing the homework activities, which included utilizing a pause bracelet, and mindful meditation exercises. These results indicate that the MARST program is feasible to implement as a group-training program in a workplace setting to promote resilience, mindful awareness, and social-emotional well-being and reduce non-resilient thinking styles for human services workers. One-month and three month post intervention data is yet to be collected.

The Influence of Feelings of Guilt on the Relationship between Burnout and Psychosomatic Disorders in Portuguese and Spanish Teachers

Hugo Figueiredo-Ferraz, Pedro R. Gil-Monte

University of Valencia, Valencia, Spain

Stress is the fourth most common health symptom reported by European workers. Teachers are a high-risk population with a relevant prevalence rate for work-related stress because of the highly emotional nature of this work (Chang, 2009; Pena, Rey, & Extremera, 2012). One of the main consequences of work-related stress is burnout. According to Gil-Monte (2012) burnout progresses in a parallel way from the cognitive deterioration (i.e., low enthusiasm towards the job) and the emotional deterioration (i.e., psychological exhaustion) to attitudes and behaviours of cynicism and indifference (i.e., indolence). The model considers that in some cases, negative attitudes on the job, especially towards the people with whom the worker establishes work relationships, lead to feelings of guilt (Gil-Monte, 2012). Feelings of guilt are a symptom that appears to be involved in the burnout syndrome (Ekstedt & Fagerberg, 2005; Maslach, 1982). This variable could explain different types of burnout (Farber, 2000; Vanheule, Lievrouw & Verhaeghe, 2003), taking into consideration the role of feelings of guilt in the relationship between burnout and its consequences.

The aim of this study was to investigate the mediator role of feelings of guilt in the relationship between burnout and psychosomatic disorders, and the cross-national validation of this role according to the Gil-Monte (2005; 2012) model of burnout in two samples of teachers (Portuguese vs. Spanish teachers).

The study sample was composed of 1,266 teachers, 1062 from Spain and 204 from Portugal. Using Amos 7, a structural equation model was evaluated. The measures of goodness of fit for the model for the Spanish sample were: $\chi^2(df = 9) = 75.46$ ($p = .000$), RMSEA = .083, GFI = .98, AGFI = .94, CFI = .95, NFI = .95; and for the Portuguese sample the measures of goodness of fit for the model were: $\chi^2(df = 9) = 20.20$ ($p = .000$), RMSEA = .078, GFI = .97, AGFI = .91, CFI = .95, NFI = .92. This indicates that the fit of this model was satisfactory for the two samples.

The results obtained provide empirical partial evidence for the mediator role of guilt in the relationship between burnout and psychosomatic disorders (i.e., mediator role of feelings of guilt: indolence-guilt- psychosomatic disorders) for two samples of teachers from Spain and Portugal.

Work and Ambulatory Blood Pressure

Vera JC Mc Carthy, Ivan J Perry, Birgit A Greiner

University College Cork, Cork, Ireland

Background: The effect of work on blood pressure (BP) in a general population with appropriate adjustment for confounders is not well defined. High job control has been found to be associated with lower BP and with nocturnal BP dipping. However, with older workers this may be compromised and has not been studied extensively.

Methods: A cross-sectional study was carried out on a primary care-based sample ($n = 2,047$) aged 50-69 years. Data were collected on socio-demographic factors, medication, clinic and ambulatory blood pressure (ABPM). Of those with ABPM data, $n = 555$ were workers with $n = 267$ of them wearing the device on a work day. Job control was measured using two scales from the Copenhagen Psychosocial Questionnaire (COPSOQ) (possibility for development and influence at work). Nocturnal systolic blood pressure (SBP) dipping was the reduction in SBP from day to night-time using ambulatory systolic BP readings.

Results: Clinic and ABPM systolic readings increased by age, male gender, overweight/obese, low physical activity and anti-hypertensive medication. Adjusted analysis showed workers with high possibility for development more likely to have high awake and asleep SBP [OR 1.80 (95% CI 1.11-2.93)], [OR 1.75 (95% CI 1.00-3.09)] respectively, and in the partially adjusted model, more likely to be nocturnal SBP dippers [OR 1.69 (95% CI 1.02-2.80) $p=0.04$]. Workers with high possibility for development had higher asleep SBP on work days.

Conclusion: Older workers with high possibility for development may be more at risk of cardiovascular disease resulting from high blood pressure with little evidence of sufficient nocturnal SBP dipping.

How does Control at Work and at Home Relate to the Balance Between Work and Family for Woman and Men in Different Employment Grades? Results from the Whitehall II Study

Helena Falkenberg^{2,1}, Jenny Head²

¹University College London, London, UK, ²Stockholm University, Stockholm, Sweden

Work and family are two domains that expose employees to high demands (e.g., Allen, Herst, Bruck, & Sutton, 2000), but multiple demanding roles could also be beneficial (e.g., Byron et al., 2005; Innstrand et al., 2009; Öun, 2012). It is possible that employees in some circumstances benefit from the dual domains, while in other circumstances the balance between work and family may be too difficult to maintain. Work factors, such as control, have been shown to facilitate a successful balance between family and work (Grzywacz & Butler, 2005). However, research indicates that control at work may not always reduce negative interactions between work and family. Rather, control in combination with certain factors, such as low educational level (Elwin-Nowak, 1999) or high degree of planning behaviour (Lapierre & Allen, 2012) may be beneficial to the work and family interaction. There are also indications that control at home is important to maintain a balance between work and family (Lapierre & Allen, 2012), but research about control at home in relation to work-family interference is scarce.

This study aimed to increase the knowledge concerning how control in combination with other factors influence the balance between work and family and sets out to investigate how control at work and control at home relate to the possibility of combining the domains of work and family for women and men in different employment grades.

Data from British Civil Servants that participate in the Whitehall II study, phase 3 (1991-1993) and phase 5 (1997-1999), will be analysed. Initial analyses suggest that control – both at home and at work – reduces negative interference between work and family. Employees in higher grades report more difficulties in combining work and family, while the results concerning gender are more mixed. Results of the interactions between gender, employment grade and control in relation to work-family interference and family-work interference will be analysed in due course.

The results will add to the knowledge of how control at home and at work relate to the possibility for women and men at different grades to combine two important spheres of their lives; that of work and of family.

Evaluation of wellbeing among call centre staff: a practical measure

Helen McFarlane¹, Rich Neil¹, Karianne Backx¹, Andy Smith²

¹Cardiff Metropolitan University, Cardiff, UK, ²Cardiff University, Cardiff, UK

Background: Wellbeing among call centre staff is lower than average (Johnson et al., 2005). Call centre employees are at high risk of mental health problems and show low job-related wellbeing (Sprigg et al., 2003) as well as having high levels of sickness absence (CIPD, 2012).

Interventions to improve wellbeing among these employees are likely to be more effective where they target specific problem areas. An assessment of wellbeing within each workplace is therefore required. However, wellbeing evaluation questionnaires often take at least half an hour to complete (e.g. Faragher et al., 2004) – longer than call centre managers may be willing to release staff from telephone duties.

Method: The Wellbeing Process Questionnaire (Williams & Smith, 2012) is a recently developed tool for briefly assessing wellbeing which can be completed in approximately 10 minutes. The questionnaire evaluates a range of wellbeing outcomes including stress, psychological wellbeing and job satisfaction as well as job characteristics, relationships at work, coping strategies and individual differences. This study evaluated the usefulness of this measure for assessing wellbeing in a call centre environment. All staff working at a large call centre in South Wales (approximately 800) were invited by email to complete an electronic questionnaire which was hosted on the organization's intranet site. Employees were allowed time to complete the questionnaire during their weekly team meeting.

Results: 397 employees completed the questionnaire (49% response rate). Regression analysis found that the measured variables significantly predicted staff wellbeing, $F(22, 373) = 35.54$, $p < .001$. The model accounted for around two thirds of the variance in wellbeing ($R^2 = .68$, adjusted $R^2 = .66$). The measure was also able to detect areas of work and individual employees with low levels of wellbeing and to identify predictors of specific wellbeing outcomes (e.g. workplace stress, depression). However, due to the recent development of the measure, there is currently no normative data for comparison.

Conclusions: The Wellbeing Process Questionnaire is a practical measure of wellbeing for use in call centres since it can be incorporated into the working day of call handlers. It is also able to successfully predict wellbeing among these employees as well as identify specific problem areas in order to target intervention. Future development of the measure could include the establishment of norms, which would allow comparative wellbeing to be assessed.

The Linking Role of Cognitive Appraisal in Day-level Effects of Time Pressure on Performance

Roman Prem, Matea Paškvan, Bettina Kubicek, Christian Korunka
University of Vienna, Vienna, Austria

The present study investigates whether day-level effects of time pressure on performance are linked through cognitive appraisal processes. The challenge-hindrance stressors framework (e.g., LePine et al., 2005) classifies stressors as hindrance stressors (e.g., role ambiguity) vs. challenge stressors (e.g., time pressure, workload) based on a priori assumptions. Recently Webster et al. (2011) have pointed out that an employee's cognitive appraisal of stressors as challenge or hindrance should be examined directly. They demonstrated that the general effects of workload on strains and on job attitudes are partially mediated through the cognitive appraisal of workload as a hindrance.

Our study extends this previous work by Webster et al. (2011) by examining indirect effects of time pressure on performance. Meta-analyses have shown that challenge stressors like time pressure can influence performance both negatively through strain as well as positively through motivation (LePine et al., 2005). As performance is also known to have substantial and meaningful fluctuations across time (Beal et al., 2005), we investigated day-level effects. We expected that the effects of daily time pressure on daily performance are mediated through fluctuations in the cognitive appraisal of time pressure.

A diary study was conducted with 66 office workers (34 female; mean age=35.8, $SD=10.4$). Each provided data over at least three work days. In total 259 work days were analysed using multi-level mediation analyses (Preacher et al., 2011). The results showed that higher levels of

daily time pressure were appraised as more hindering, $r(227)=-.44$, $p<.01$. Daily time pressure had also indirect effects through its cognitive appraisal on daily task performance, coefficient=-0.08, $SE=0.03$, 95%CI[-0.15,-0.02], as well as daily contextual performance, coefficient=-0.09, $SE=0.03$, 95%CI[-0.18,-0.02].

Our findings indicate that time pressure although labelled a challenge stressor is not necessarily appraised as a challenge. Quite contrary, higher levels of daily time pressure are appraised as more hindering. Furthermore, the cognitive appraisal seems to play a linking role between daily time pressure and daily performance. These results emphasize the importance of obtaining information about the appraisal of stressors as a challenge or a hindrance in order to better understand their effects on performance among other organizational and health-related outcomes.

Well-being at Work Across Europe: An Assessment of the Concept

Roxane Gervais¹, Marie-Amelie Buffet², Lieven Eeckelaert³, Mark Liddle¹, Zinta Podniece⁴
¹Health & Safety Laboratory, Buxton, Derbyshire, UK, ²Groupement de l'Institution Prévention de la Sécurité sociale pour l'Europe, Paris, France, ³Prevent, Brussels, Belgium, ⁴European Agency for Safety and Health at Work, Bilbao, Spain

Introduction: Well-being at work (WBW) impacts strongly on the work environment. Organizations with healthy workers tend to have a more efficient and productive workforce, while those with less healthy workers can incur significant costs in addressing the health needs of their employees and may struggle with performance and productivity (Anttonen & Vainio, 2010). While there is no single agreed definition of well-being or of its conceptualisation, it is useful to gain an understanding of what it does constitute (Schulte & Vainio, 2010). Within Europe, there is agreement on the benefits of WBW (Anttonen & Vainio, 2010). However, the strong Western influence on the understanding of the term may not account for Europe's country-specific diversity. This present research explored if WBW is comparable across Europe in respect of occupational safety and health (OSH).

Method: A semi-structured questionnaire was sent to a network of OSH professionals from the then European Union (EU)-27 and to experts from Iceland, Norway, Switzerland and multinational organizations (N = 37). To supplement the data, a literature review was conducted, focussing on the WBW material generated from the respective countries.

Analysis: Qualitative analyses, including content analysis, facilitated an understanding of the data, inclusive of assessing the various terms and the similarities or differences in the strategies, legislation, initiatives, programmes that existed within each respective country.

Results: The literature review highlighted the paucity overall of material in this area. For some of the countries, the available information reflected the progress made in this area. For others, very limited information was available. In respect of the questionnaire, 23 responses (close to one-third of those sent) were received. The open-ended questions reflected some, but not extensive cohesiveness in the various areas that were considered.

Discussion: It could be argued that OSH is an integral part of well-being at work. The present research reflected that the focus of well-being is country specific, influenced by language, culture, work practices and ethnicity. This finding could be seen as supporting the view that well-being is a holistic concept and is influenced by individual, and in the present research, country differences. Further, the findings imply that WBW, whilst it has been assessed in a general context, has to take account also of what is best for the individual, for the organization and for the country. These issues and the necessity or usefulness of gaining a common definition of well-being will be discussed.

Stress and Depression among Nurses

Elisabete Borges¹, Teresa Rodrigues¹, Cristina Queiros^{2,3}

¹Oporto Nursing School, Porto, Portugal, ²Psychosocial Rehabilitation Lab, Porto, Portugal,

³Faculty of Psychology and Educational Sciences – University of Porto, Porto, Portugal

Background: Traditionally, stress has been defined as a stimulus, a response or the interaction between stimulus and response (Dewe, Driscoll & Cooper, 2010). Nurses represent a professional group where the stress related to work is an important concern (ICN, 2007; Farquharson, 2013). Among nurses the factors that affect security and health are complex, negatively affecting caregiving to the patients and community (Ribeiro et al., 2012; Happell et al., 2013).

Aims: This study aimed to describe the stress response and the relation between stress response and psychosocial variables in a sample of Portuguese nurses, in an exploratory and descriptive type of study, integrated within the paradigm of quantitative research.

Method: A non-probabilistic sample of 139 nurses agreed to collaborate in the study, where 92% were female, 61% married, mean age of 33.4 years (SD = 5.7), mean years of working experience was 10.6 (SD = 5.0), and 75% were permanent staff of the institution. Additionally, 23% had leadership responsibilities and 66% were not satisfied with the work place. A questionnaire was used to collect socio-demographic and professional data, and the Portuguese version of “Answers and Personal Resources Inventory” of the Brief Personal Survey (McIntyre, McIntyre & Silverio, 1995) was used (Cronbach Alfa coefficient was 0.74).

Results: The scales Pressure-Overload and Distress and Health yielded the highest mean ($\underline{M}=49.6$, $\underline{SD}= 25.2$; $\underline{M}=42.5$, $\underline{SD}= 25.0$). Depression was the least reported response to stress by the nurses, with the lowest mean ($\underline{M}=28.7$ ($\underline{SD}=25.6$)). The most prevalent responses to stress were pressure-overload, distress and health, anxiety and dysphoric emotionality. These results to stress responses suggest a dominance of psychological stress expressions.

Conclusions: These results highlighted that stress is a reality among nurses and the implementation of intervention programs in the management of occupational stress should be a priority within health institutions. The Portuguese National Plan of Occupational Health (2013) already alerts occupational stress management as a priority. As formal caregivers, nurses have an important role to deal with patients, especially when they are suffering physical or emotional pain. If nurses feel stressed, the quality of their tasks will decrease, prejudicing patients (Grazziano & Bianchi, 2010).

Personality Traits as Burnout Predictors among Police Recruits

Cristina Queiros^{1,2}, Antonio Marques^{1,3}, Mariana Kaiseler^{1,2}, Pedro Sousa⁴

¹Psychosocial Rehabilitation Lab, Porto, Portugal, ²Faculty of Psychology and Educational

Sciences - University of Porto, Porto, Portugal, ³School of Allied Health Sciences - Polytechnic of Porto, Porto, Portugal, ⁴Public Security Police Training School, Torres Novas, Portugal

Background and Aim: Police officers are vulnerable to burnout, experiencing stressors even in their academy training (Alarcon et al., 2009; Ivie & Garland, 2011). Police work is frequently regarded as inherently stressful because of the personal risk of exposure to confrontation and violence and the day-to-day involvement in a variety of traumatic incidents (Collins & Gibbs, 2003). Additionally, literature suggests the existence of personality profiles of police officers (Detrick & Chibnall, 2013; Gerber & Ward, 2011), and that some personality traits protects from burnout (Swider & Zimmermann, 2010). Police officers' stress or burnout is an important topic of research because burnout can lead to aggressive behavior toward citizens (Kop & Euwema, 2001) and also because during stressful situations stimuli can be misinterpreted as threats more frequently, eliciting aggressive responses to these threats (Griffin & Bernard, 2003). We aim to verify if Eysenck's personality traits are predictors of burnout among police recruits.

Method: A sample of 290 police recruits (86% male, mean age=23.8) during 2012 completed on-line self-completion versions of the Maslach Burnout Inventory - Student Survey (Schaufeli et al., 2002; Maroco & Tecedor, 2009) and Eysenck's Personality Questionnaire (Eysenck & Eysenck, 1996). Formal authorisation was given by Police Training School inviting police recruits to voluntarily participate.

Results: Participants presented; low levels of burnout (1.4 to exhaustion, 0.6 to cynicism, and 4.7 for personal accomplishment in a 0-6 scale), low levels of neuroticism, and high values of extraversion (respectively 1.7 and 9.8 in a 0-12 scale). Personality traits were correlated with burnout dimensions, predicting 24% of exhaustion, 15% of cynicism and 12% of personal accomplishment.

Conclusions: Exhaustion and cynicism were related with aggressiveness and detachment attitudes towards work, which negatively affect police officers' interactions with citizens. Literature suggests that aggressivity is elicited by stressful situations (Griffin & Bernard, 2003), and that burnout is a predictor of aggressivity (Bawa & Kaur, 2011; Lee & Egan, 2013; Queirós et al., 2013). While on duty, police officers cannot react aggressively, except in special situations of danger and threat to public order. Thus, aggressivity and the use of excessive force by police officers is an actual concern (Koepler et al., 2012; Neely & Cleveland, 2012), thus stressing the importance of trying to understand how police officers' personality profiles can predict burnout. Among stressful professions, training employees to understand personal characteristics which may contribute to burnout, and how to face job stressors, would be helpful in preventing burnout and improve their occupational health.

An Evaluation of a Sun Safety Intervention for the UK Construction Sector using the Transtheoretical Model of Behaviour Change

Paul Madgwick, Jonathan Houdmont
University of Nottingham, Nottingham, UK

Background: In 2004-5, 58% of UK occupational cancer deaths attributed to solar ultraviolet radiation involved construction workers, indicating a need for interventions that result in the more widespread awareness and use of sun safety measures.

Aim: To examine the extent to which exposure to a sector-specific sun safety training intervention results in the increased use of a set of 10 sun safety measures.

Method: The authors developed a 12-minute DVD-based sun safety training intervention for the UK construction sector. At baseline (summer 2012), 1,283 construction workers from across the UK completed a questionnaire that assessed their stage of change (in accordance with the Transtheoretical Model of behaviour change) in relation to 10 sun safety measures. Workers subsequently received the intervention. At 12-month follow-up (summer 2013) workers completed a second questionnaire in order to assess shifts in their stage of change in relation to each sun safety measure. A naturally occurring control group was used that comprised workers who completed the baseline and follow-up questionnaire but who inadvertently failed to receive the intervention.

Results: At baseline fewer than one quarter of participants were in the action or maintenance stage of change on five sun safety measures (avoid/minimise work in sunlight in the middle of the day; swap jobs to minimise the amount of time working in the sun; use a shade/cover when working in the sun; wear a safety helmet with neck protection; check the UV index forecast for the day). Time 2 data will be available in October 2013. Results will be presented on the extent to which respondents' use of sun safety measures has changed (or not) following exposure to the intervention.

Conclusions: It is anticipated that the results will provide support for the efficacy of sun safety training in UK construction. The findings are expected to suggest that employer-led initiatives on sun safety in the industry and enforcement of legislation would likely result in a reduction of the occupational cancer burden.

The Impact of Menopause on Working Life: A Survey of Women in the UK

Juliet Hassard¹, Sara J. MacLennan², Amanda Griffiths³

¹*The Centre for Sustainable Working Life, Birkbeck College, London, UK*, ²*Academic Urology Unit, University of Aberdeen, Aberdeen, UK*, ³*Division of Psychiatry & Applied Psychology, School of Medicine, University of Nottingham, Nottingham, UK*

Women comprise nearly half of the UK workforce, with about 3.5 million aged between 50-65 years). Little research has focussed on health issues facing older women workers. Very little has explored working women's experience of the menopause (Griffiths, MacLennan & Hassard, 2013).

The average age of menopause (the time when menstruation has ceased for 12 consecutive months) in the UK is 52, but menopausal transition and associated hormonal changes typically lasts between four and eight years. Menopausal transition may be accompanied by symptoms which include hot flushes, palpitations, night sweats, sleep disturbance, fatigue, poor concentration, irritability and mood disturbance.

This study had three aims: (i) to identify the perceived effects of menopausal symptoms on working life; (ii) to outline the perceived effects of work on menopausal symptoms; and (iii) to provide information and recommendations for employers, for women and for those who advise them.

An electronic questionnaire was distributed to women aged 45-55 in professional, managerial and administrative (non-manual) occupations in ten British organizations. Items included: age, age and gender of line manager, educational level, job satisfaction; menopausal status; symptoms that were problematic for work; hot flushes; working conditions; work performance, disclosure to line managers; individual coping strategies; and, effective workplace adjustments and employer support. The final sample comprised 896 women.

Menopausal symptoms caused difficulties for some. The most problematic symptoms were: poor concentration, tiredness, poor memory, feeling low and lowered confidence. Hot flushes were reported as particularly difficult. Over a third of women felt their work performance had been negatively affected. Over half were unwilling to disclose menopause-related health problems to their line managers, most of whom were men or younger than them.

Individual coping strategies for dealing with menopausal symptoms at work were described. Four major organizational-level recommendations emerged: (i) greater awareness among managers about menopause as a possible occupational health issue, (ii) increasing flexibility of working hours, (iii) access to informal and formal sources of support at work, and (iv) attention to workplace temperature and ventilation. This study has shown that menopause can present problems for some women at work, but that there is much that employers can do to support them. The research has led to the development of guidance for managers and trades union representatives.

Workplace Bullying and Psychological Distress: Data from the 2010 U.S. National Health Interview Survey

Toni Alterman, Jia Li, James Grosch, Sara Luckhaupt
CDC, NIOSH, Cincinnati, OH, USA

The goal of this study is to examine the relationship between workplace bullying and psychological distress among a national sample of U.S. adults who were currently working, or had worked in the previous 12 months (N=17,524).

Data are from the 2010 National Health Interview Survey (NHIS), a nationally representative source of information about the health of the civilian, non-institutionalized, household

population of the U.S. Serious psychological distress during the previous month was measured using standard dichotomized scoring of the K-6 instrument (Kessler, 2002) which was developed for screening persons with mental health problems severe enough to cause moderate to serious impairment in social or occupational functioning that requires treatment. The K-6 consists of 6 items: beginning with –how often in the past month did you feel: nervous, hopeless, restless, sad or depressed, tired out for no good reason, and worthless.

Analyses were conducted using SUDAAN to account for the complex sampling design. The weighted prevalence of psychological distress among current and recent workers was 3.0% (95%CI 2.7, 3.4). Exposure to workplace bullying was defined as a response of yes to the following question: 'during the past 12 months were you threatened, bullied, or harassed by anyone while you were on the job?' The prevalence of psychological distress among those exposed to workplace bullying was 9.8% (95% CI 7.9, 11.7), and the prevalence among those not exposed was 2.5%, OR=4.30 (95% CI, 3.40, 5.43). Further multiple logistic regression analyses were conducted for women and men separately.

After adjusting for race/ethnicity, education, marital status, broad occupational group, health status, several health behaviours, household income, and having seen a mental health professional, bullying remained significantly associated with psychological distress in both women (OR=2.75; 95% CI 1.93-3.92) and men (OR=3.08; 95% CI 2.09, 4.58). Results of multiple regression analyses and implications for workers and management will be presented.

Using Visualization Objects to Secure Employee Commitment and Measure Intervention Progress

Liv Gish, Signe Poulsen, Christine Ipsen
Technical University of Denmark, Lyngby, Denmark

Many intervention studies use before-and-after measurements to assess the effects of interventions. These measurements give an indication of the overall output of an intervention. Unfortunately, they do not tell much about the progress or the results achieved during the intervention. In a recently completed intervention study, using the PoWRS (Prevention of Work Related Stress) model, four Danish small and medium sized enterprises (SMEs) participated. In the study we tested a new tool, which we label visualization object, to evaluate the progress and results of an intervention on an ongoing basis throughout the intervention period. Besides measuring the progress of the intervention, the tool also visually communicates the progress to the participating managers and employees. The aim of this paper is to share the experiences with the tool and the promising effects of it. Furthermore, we prescribe a set of design criteria and recommendations for the tool and its use.

The visualization object is created in the beginning of the intervention process by the companies themselves, and only creativity sets the limit for its design, e.g. it can be cylinders with different coloured balls or it can be a Christmas tree with different coloured ribbons. The object just has to have built-in some kind of voting system, as the evaluation of the intervention progress is achieved by employee voting. E.g. by using different colours of balls or ribbons the employees state if they think the intervention has improved the current situation, it is unaltered or has worsened the situation.

Before developing and implementing the visualization object the four SMEs were instructed in the purpose of the tool and were shown examples from previous intervention projects for inspiration. The four SMEs came up with four very different designs. In the implementing phase we observed that some companies exploited the visualization object better than others. Clear communication about the object's use and instruction in using it as well as an appropriate location for the object had a positive influence on its usability.

Our analysis shows that the visualization object is more than a tool for measuring the intervention progress on an ongoing basis. The visualization object also helps the companies to: 1) stay focused on the goal, 2) indicate when adjustments of the intervention activities should be made to secure that the goal is reached, and 3) remind the participants about the current intervention and their engagement in it which secures employee commitment.

Psychosocial Job Characteristics, Coping and Mental Health among Swedish Police Officers in Relation to Deportation Work with Unaccompanied Children

Jonas Hansson¹, Malin Eklund Wimelius⁴, Lars-Erik Lauritz³, Anna-Karin Hurtig¹, Mehdi Ghazinour²

¹*Department of Public Health and Clinical Medicine, Umeå, Sweden,* ²*Department of Social work, Umeå, Sweden,* ³*Police Education Unit, Umeå, Sweden,* ⁴*Department of Political Science, Umeå, Sweden*

During the past decade the number of unaccompanied children seeking asylum in Sweden has increased tenfold. Most children are allowed to stay but as more children arrive, the number of rejections will also increase.

As a result of increasing migration the Swedish government has focused on the involved agencies and stakeholders in this issue. For example, the government has stated that the Police in collaboration with the Migration Board and the Probation Services shall considerably increase the enforcement of deportations of people enrolled in the Migration Board's receipt, relative to previous years. However, the government has also stated that unaccompanied children, whose applications for asylum are rejected, have the right to a dignified return.

There is a gap in the literature regarding understanding how implementation of policies affects authorities and staff working with asylum seeking children and vice versa. In fact, there is no scientific knowledge of how police officers perceive their participation in the deportation of unaccompanied children. Moreover, there is no knowledge of how the police handle difficult situations involving these assignments. This project sets out to explore policy implementation as well as collaboration between different actors in the deportation process of unaccompanied children, and to investigate psychosocial job characteristics, coping strategies and general mental health among police officers in Sweden in relation to deportation work with unaccompanied children. Semi-structured interviews with border police officers, social workers, legal guardians and officials at the Migration Board were conducted. Focusing on the Border Police, the interviews were analysed using content analysis to reach a deeper understanding of the phenomenon.

A cross-sectional study with a descriptive and analytical approach in order to study the association between the components was conducted. Swedish police officers answered four standardized questionnaires (Demand–Control–Support Questionnaire, Interview Schedule for Social Interaction, Ways of Coping and General Health Questionnaire) and one socio-demographic questionnaire. The research questions are: explore how the border police officers perceive the relationship between the demand of executing more deportations and the common EU guidelines and international standards on human rights; explore the border police officers' cooperation and collaboration with the Migration Board, the Social Services, and legal guardians in the deportation process of unaccompanied children; investigate the association between psychosocial job characteristics, coping strategies and general mental health among police officers working with the deportation process; determine the extent to which police officers receive individual and organizational support in relation to deportation of unaccompanied asylum seeker children.

Self-Determination Theory: A Way Forward for Occupational Health Interventions?

Susanne Tafvelin, Andreas Stenling

Umeå University, Department of Psychology, Umeå, Sweden

Background: Self-determination theory (SDT) is a theoretical framework used to understand human motivation and antecedents and consequences of different types of motivation. SDT has traditionally been applied in school, sport, and health care settings showing positive associations between need satisfaction, self-determined motivation, performance, and well-being in these aforementioned domains. The integration and application of SDT into mainstream work and organizational psychology is still scarce, although lately increasing. Research in work-place settings has demonstrated positive outcomes when employees' experiences need support from leaders and co-workers. Need support from leaders and co-workers have been related to for example higher well-being, work satisfaction, better performance, and lower intention to quit. These findings, however, are mainly based on observational or laboratory studies, and the need for interventions studies have been pointed out by numerous scholars. Interventions based on SDT have in other settings shown positive effects in terms of weight loss, smoking cessation, psychological and physical well-being, and academic performance. The purpose of these studies is to develop a scale to measure need support and need satisfaction in a Swedish work context, which then will be used to examine effects of interventions based on SDT.

Interventions: Previous research suggests that leadership training could be a cost effective alternative to large scale interventions in order to improve employee health and well-being. Also, need satisfaction has been found to influence well-being. Following this line of thought, these studies sets out to examine if interventions based on developing leaders ability to provide need support and thereby fulfil employees need satisfaction can improve employee health. The interventions will follow guidelines for successful SDT-interventions recently put forward. These guidelines include, for example, brief sessions (1-3 hours) with supplemental booster activities and a focus on skill-based activities provided with different media. Both quasi-experimental and experimental designs will be employed with a base-line and two follow-up measurements.

Implications: Even though previous interventions in other settings have demonstrated positive effects, these interventions have primarily targeted employees, not leaders. By using the same theoretical framework for leadership training and in a work setting, these studies give a unique opportunity to examine if SDT could be a way forward for occupational health interventions in terms of leadership training. We anticipate reporting our results at future conferences and hope at this point to get valuable feedback from colleges at the conference.

New Ways of Working (NWW) and Occupational Health: The Role of Specific Job Resources

Christian Korunka, Cornelia Gerdenitsch

University of Vienna, Vienna, Austria

In many modern workplaces fixed working schedules have been increasingly replaced by flexible ones, giving employees more autonomy in terms of temporal flexibility. Many employees also have the opportunity to work in "non-traditional" workplaces, like telework, co-working spaces, "hot desking", work while commuting etc. These new temporal and spatial flexibilities are supported and triggered by an increased use of information and communication technologies. Collectively, these three relatively new components of modern workplaces are labelled as "New Ways of Working" (NWW) (e.g. Brummelhuis et al., 2012).

We argue that job resources, namely autonomy and social support may play somewhat different roles within these new working environments. For example, NWW may strongly increase autonomy, which may be positive for well-being at work. On the other hand, social support becomes more important at NWW workplaces. We conducted a qualitative study and a longitudinal study to shed more light on job resources related to NWW.

The qualitative study, based on analyses of interviews with 45 employees, revealed that positive NWW work experiences were related to increased autonomy, whereas negative NWW work experiences were related to both, increased autonomy and external control (Gerdenitsch et al., 2013). We also found that very high autonomy, named as “increased autonomy demands”, has the potential to deteriorate well-being at work (Paškvan et al., 2012). Self-determination theory (Ryan & Deci, 2000) and the framework of social acceleration (Rosa, 2003) may help to understand these findings.

The second study analysed the importance of social support at work. Especially in open office working scenarios where employees are not working at the same desk each day, social interaction might change. We will present results from a longitudinal study, where the implementation of hot desking (flexible work desks in a new office design) in a consulting firm (N=60 knowledge workers) was accompanied, shedding light on how social interaction and social support might have changed along the implementation process. It is also hypothesized that strong perceptions of increased autonomy may lead to increases in perceived work load. Detailed results from this study will be available at the conference.

Job Informality and Psychological Distress in Colombia

David Hurtado

Harvard School of Public Health, Boston, MA, USA

Background: Job informality is typically defined as the work performed outside regulatory structures, and it is characterised by a lack of employment-related benefits, like savings in a pension/retirement fund or health insurance. Though job informality has been a growing social problem in Colombia and other Latin American countries, less is known about its potential repercussions on individual mental health.

Aims: (1) to characterize job informality in a sample of working adults of Colombia's main cities, (2) to test whether informal workers reported higher psychological distress compared with workers with benefits, and (3) to identify which absent benefit is linked with higher distress.

Methods: A cross-sectional study. Data were collected in 2011 in a random and representative sample of adults at six of the main cities of Colombia (n=5,002). Analyses were restricted to employed adults (18-65 years) (n=2,154). Employment information was self-reported. Psychological distress was measured with the K6 questionnaire and scores were calibrated with Item-Response Theory models (Z-scores).

Results: Job informality was prevalent in 65 percent of the workforce, comprised by 35 percent who did not have pension fund nor health insurance, 25 percent who lacked pension funds but had health insurance through their employment, and another 5 percent who had pension funds but no health insurance. Psychological distress did not differ between formal (two benefits) and informal (no benefits) workers. However, workers without health insurance had higher psychological distress compared with insured workers ($\beta=0.08$. 95% CI 0.01, 0.15, $p<0.05$), independently of socio-demographic (age, sex, marital status, city or origin), socioeconomic (education and household income) characteristics, as well as pension fund status.

Conclusions: The majority of the Colombian workforce reported no job-related benefits. Even though lack of pension funds accounted for most of job informality, psychological distress was higher among those without health insurance. Labourpolicies ought to encourage access to the health-care system to reduce mental health issues.

Investigating Canadian Nurses' Quality of Work Life and Stress in Urban, Rural, and Remote Acute Care Locations in North-eastern Ontario

Judith Horrigan^{1,5}, Nancy Lightfoot^{2,5}, Michel Lariviere^{3,5}, Kristen Jacklin⁴

¹*Laurentian University School of Nursing, Sudbury Ontario, Canada,* ²*Laurentian University School of Rural and Northern Health, Sudbury Ontario, Canada,* ³*Laurentian University School of Human Kinetics, Sudbury Ontario, Canada,* ⁴*Northern Ontario School of Medicine (NOSM), Sudbury Ontario, Canada,* ⁵*Centre for Research in Occupational Safety and Health (CROSH), Sudbury Ontario, Canada*

Background: Nurses work in environments that are known to be physically and psychologically demanding, and biologically hazardous. Researchers have suggested that nurses' health is linked to their quality of work life (QOWL) and work environment. Research has demonstrated that inferior work environments are associated with higher illness, disability, and absenteeism rates among nurses across Canada. The costs to the healthcare system associated with illness, disability, injury, and absenteeism rates of nurses are significant, with an annual cost of \$711M.

Objective: The current research aims to provide an understanding of North-eastern Ontario Registered Nurses' (RNs) QOWL and stress in urban, rural, and remote, acute care locations. This knowledge will assist decision and policy makers to address issues that are negatively impacting nurses, and affirm areas that have a positive impact on nurses QOWL.

Theoretical Framework: The *Nurses' Quality of Work Life* (NQOWL) framework, based on Social Technical System (STS) theory, guides this research. In the NQOWL framework, the social and technical subsystems of the organization comprise nurses' practice environments that can influence the QOWL dimensions of nurses work context, work design, work and home life, and work world.

Methods: A mixed methods sequential explanatory design is being used to investigate the QOWL and stress of RNs (n=200) working in two urban, one rural, and one remote acute care setting in North-eastern Ontario. Phase I involved collecting quantitative data utilizing a self-administrated questionnaire that included demographic information and three scales; the Brooks Quality of Nursing Work Life, the Practice Environment Scale of the Revised Nursing Work Index (PES-NWI-R), and the Nursing Stress Scale (NSS). Analysis of variance (ANOVA) was used to explore the mean group differences of nurses' scores for each of the QOWL, PES-NWI-R, and NSS scales. Logistic regression analysis was conducted to determine factors associated with nurses' QOWL. Phase II of the study collected qualitative data and involved one-on-one semi-structured interviews with two RNs and one nurse leader from one urban, rural, and remote site, to explain findings identified from the quantitative analysis.

Results: Preliminary results of RNs QOWL and stress from Phase I data analysis will be presented. Addressing QOWL issues can have a positive effect on the quality of a care provided to patients, improve health outcomes, and reduce overall costs to the health care system.

Effects of Work Activity on Cognitive Aging: The Case of Interpreters

Sébastien Henrard, Agnès Van Daele

Université de Mons (Umons), Mons, Belgium

Introduction: With the aging of the population and the rising of retirement age, it is important to consider the cognitive abilities of older workers. This subject is related to the issue of job retention and the ability to remain efficient while preserving one's health. Models of normal aging show a cognitive decline with advancing age. Among these, executive functions begin to decline after the second or third decade of life. Some studies assume the existence of a mechanism for the preservation of cognitive functions. This preservation is the result of regular

and consistent use of the cognitive function (Marquié, 1997; Salthouse, 1990). To verify this hypothesis, we have developed a study on the evolution of executive functions with age among conference interpreters.

Participants: 120 subjects were divided into two groups: 60 professional interpreters (23 men and 37 women) aged 25-65 years (divided into four age groups of 15 interpreters: 25-34, 35-44, 45-54, 55-65 years). And 60 monolingual (29 men and 31 women) matched for age and socio-cultural level.

Tasks: Software E-Prime 2.0. Two tasks of reaction times (Motor – Oral). Three tasks from the model of executive functions (Miyake et al., 2000): Letter Memory (Updating); Plus-Minus (Flexibility); Antisaccade (Inhibition). A Computer-based Brown Peterson (Multitasking).

Results: A significant difference between the groups appears after age 35 for multitasking ($p=.016$), updating ($p=.001$), flexibility ($p=.007$) and reaction time ($p=.029$). These results imply a greater decrease of performance on the tests for the control group. A significant difference appears after age 45 for inhibition regarding the reaction time and after 55 years for the precision of response. Further results will be presented during the Conference.

Discussion: Before age 35, there is no significant difference between the groups because there is a peak of performance on tests assessing executive functions between 25 and 35 years. Our results suggest that the characteristics of the activity of interpretation could slow the normal cognitive decline. This can be interpreted by the effects of the work activity or through bilingualism. A group of translators were assessed to test this last hypothesis.

Psychosocial Job Characteristics, Coping and Mental Health among Swedish Social Workers in Relation to the Work with Repatriation of Unaccompanied Children

Johanna Sundqvist, Anna-Karin Hurtig, Mojgan Padyab, Kenneth Ögren, Mehdi Ghazinour
Umeå University, Umeå, Sweden

The Swedish Migration Board's statistics show that the number of asylum-seeking unaccompanied children has increased substantially in recent years. In 2004, 388 unaccompanied children came to Sweden while in the year of 2012 the number was 3,578. The Swedish Government states that those unaccompanied children, who are not considered in the need of protection or have other reasons to stay in Sweden, shall have the opportunity to be repatriated in a dignified manner to their home countries. Approximately, 20 percent of the asylum-seeking children who applied for asylum were not granted permission to stay in Sweden. Within the repatriation process four authorities are engaged; social services, including social workers and Care homes, the board of legal guardians, the Swedish Migration Board and the police authority. All actors are involved in different parts of the repatriation process and they all have the responsibility to ensure that the unaccompanied child's repatriation becomes dignified. Social services have a large responsibility. They have the ultimate responsibility for supporting and helping the unaccompanied child as long as the child resides in the municipality in accordance to the Social Services Act. This can be a complex and demanding tasks for the social workers.

There is no systematic research on the repatriation work experience of social workers, or the praxis of collaboration amongst Swedish authorities regarding the returnees. This project sets out to explore how social workers in collaboration with other authorities perceive the collaboration in the work with unaccompanied children in the repatriation process. The project also aims to investigate these social workers psychosocial job characteristics, coping and mental health in relation to their work with unaccompanied children in the repatriation process.

Semi-structured interviews with social workers, staff at Care homes, legal guardians, officials at the Migration Board and the border police officers were conducted. All these professionals have varied experience of working with unaccompanied children in the repatriation process. Focusing on social workers, the interviews were analysed using thematic analysis. A cross-sectional study with a descriptive and analytical approach in order to study the association between the components was conducted using a national survey directed to social workers. The survey consisted of three standardized questionnaires (Demand–Control–Support Questionnaire, Ways of Coping and General Health Questionnaire) and one socio-demographic questionnaire. General social workers answers were used as a control-group.

Working Conditions and Psychological Health in an Educational Context: A Person-Centered Approach

Alessia Negrini¹, Jacques Perron², Marc Corbière³

¹*Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST), Montreal (Quebec), Canada,* ²*Université de Montréal; Valergon Inc., Joliette (Quebec), Canada,* ³*Université de Sherbrooke, Longueuil (Quebec), Canada*

In a Canadian public school organization composed of 2,500 employees, are there groups of persons for whom working conditions are differently related to psychological health? Using a person-centered methodology, the Job Demands–Resources model (Demerouti et al., 2001; Bakker & Demerouti, 2007) was considered to answer this question.

Data in the present study were randomly obtained from a sample of 495 participants. The large majority (308; 62.2%) were teachers [(other functions: clerical personnel=110 (22.2%), professionals=41 (8.3%), administrators=36 (7.3%)]. Classification variables (workload, work overload, over-commitment, stressors, autonomy, and flexibility) included both Job Demands (JD) and Job Resources (JR). Psychological distress and job satisfaction were used as outcome health variables, and function as an individual differences variable. With the use of a k–means cluster analysis, the 495 participants were classified into three groups of respectively 181 (36.5%), 131 (26.5%), and 183 (37%) persons. One-way ANOVAs showed that Group 1 (low JD, low JR) Group 2 (high JD, high JR), and Group 3 (high JD, low JR) were significantly different both in terms of psychological distress [($F(2, 492)=51.64, p=.000$)] and job satisfaction, [($F(2, 492)=39.23, p=.000$)]. Post-hoc Tukey's B tests showed that employees in Group 3 had significantly ($p=.000$) higher psychological distress ($M=.96, SD=.45$) and lower job satisfaction scores ($M=3.57, SD=.50$) than employees in other two groups.

Like those of Bakker et al. (2005), our findings exemplified that the combination of high JD and low JR significantly added to the prediction of psychological diseases, such as psychological distress. The 131 employees with high JD and high JR (Group 2) showed lower psychological distress as well as higher job satisfaction than participants in Group 3. According to Bakker et al. (2005), psychological diseases did not result in high levels of JD when employees experienced autonomy. When both JD and JR were low (Group 1), employees had a low level of psychological distress and an average level of job satisfaction. Individual differences were observed in terms of function [$\chi^2(6, N=495)=80.96, p=.000$]: in particular, Group 3 contained much larger (44.8%) than expected (20.7%) proportions of teachers compared to those of the three other employee categories.

In conclusion, because of high JD and low JR, teachers were more exposed to the risk of developing psychological health diseases. From a practical point of view, working in conditions characterized by high JR (e.g., more autonomy) promotes the employees' psychological health in an educational context.

Consequences of Detrimental Work Environment on Physicians' Wellbeing and Care Practice: Impact of Social Support and Psychological Capital

Leonore Robieux, Nils Myszkowski, Cecile Flahault, Franck Zenasni

Université Paris Descartes, Paris, France

Clinical practice and research have accumulated evidence on the link between empathy in the practice of care to the quality of care and patients' quality of life. Also, clinical empathy has positive effects on physicians' wellbeing and job satisfaction, and provides protection against burnout (Hojat, 2010). However, the sensitivity of physicians' empathy is highlighted. Identifying the determinants of clinical empathy is essential to further improve the quality of care and quality of life for both patients and physicians. Three factors are identified as possible determinants of empathic skills and physicians' quality of life: organizational constraints (workload, emotional and ethical requirements), together with social and psychological resources. The objectives of this study are (1) to examine the impact of psychological and organizational constraints on physicians' empathy; and (2) to explore the impact/ moderation effects of psychological and social resources.

The sample consisted of 90 practitioners (Mean age = 45.42 years, SD = 10.08, 51% female). They completed the Jefferson Scale of Physician Empathy, the Global Person Generated Index (quality of life), the Psychological Capital Questionnaire, the Perceived Social Support Questionnaire and the Effort-Reward Imbalance Questionnaire.

Firstly, physicians perceive their work environment as deleterious by the organizational constraints of effort–reward imbalance (50%, SD=0.46). Physicians report high levels of clinical empathy (M=108.47, SD=16.86), social support (M=26.81, SD=6.12) and psychological resources (M=99.22, SD=15) but low levels of quality of life (M=68%, SD=19.95). Furthermore, results indicate that psychological and social resources are not correlated. Regression analyses confirm that psychological resources influence the impact of organizational constraints on clinical empathy ($\beta=.30$; $p < 0.05$). The results also indicate that psychological and social resources influence the impact of organizational constraints on physicians' quality of life (respectively $\beta=-.17$; $p < 0.05$ and $\beta=-.14$; $p < 0.01$), in particular family life, social and recreational activities. Regarding this negative impact, this study identifies the potential moderating effect on adverse work characteristics of high social support and psychological resources. The results suggest that feeling supported, encouraged and protected enhances perceived personal resources and allows physicians to cope better with the stress of care practice. This result is consistent with that of Pronost (2008), which highlighted the positive impact of perceived social support on care practice.

Finally, this study suggests that the physicians' perceived social support and psychological resources should be considered in their professional education and the work environment.

Using the Occupational Stress Inventory- Revised in Assessing Occupational Health and Wellbeing among Employees: Reporting the Results of Several Australian Studies and their Implications for Practitioner Use

Richard Hicks

Bond University, Robina, Queensland, Australia

The Occupational Stress Inventory- Revised (OSI-R) is one of a number of questionnaires that can be used in research to enable direct comparisons across different professional groups on levels of stress and stressors experienced and of healthy coping strategies used by the employees. It is also directly useful in helping to identify training programs that might be valuable to improve these levels for individuals and the organization overall. Several research students under the author's supervision in the past 7-8 years have completed a variety of studies using the OSI-R.

This paper reports results from selected studies from these research projects. There have been two main aims. The first aim has been to examine the structural validity of the OSI-R in the Australian context in the main (examining the replicability of the three main dimensions and 14 facets: the three dimensions being assessed by the 'occupational roles questionnaire', the 'personal strain questionnaire', and the 'personal resources questionnaire'—and their related facets).

Structural equation modelling has supported the 14 facets but suggested that the three-factor structure might in practice be better seen as a four or five factor structure with the occupational roles/stressors questionnaire being divisible into at least two 'questionnaires' or dimensions). The second aim has been to identify correlates of the OSI-R dimensions and facets including with healthy functioning processes, mental health processes, and personality variables such as the big five and perfectionistic strivings. The current paper will present the results of selected studies in these two areas and draw conclusions for research and for consulting practice.

From Organizational Commitment to Professional Burnout: The Role of Perceived Organizational Justice

Giedre Geneviciute-Janoniene¹, Aukse Endriulaitiene²

¹*Department of Theoretical Psychology, Vytautas Magnus University, Kaunas, Lithuania,*

²*Department of General Psychology, Vytautas Magnus University, Kaunas, Lithuania*

Generally, organizational commitment is considered to have positive implications for organizational effectiveness and employees' wellbeing. Supposedly, organizational commitment may even act as a buffer against the strain at work (Begley, Czajka, 1993). But some studies have found that high levels of organizational commitment could drain resources of employees at work (Panaccio, Vandenberghe, 2009). These effects may occur through a focus on fast task accomplishment and high requirements on job performance. Organizational injustice is also able to sustain employee's exhaustion (Taris et al., 2004).

The purpose of this study was to test the relational model of organizational commitment and employees' professional burnout with perceived organizational injustice as mediating variable.

A cross-sectional survey was employed to gather data from 975 employees (678 women and 296 men) from different organizations in Lithuania using the Organizational Commitment questionnaire, Maslach Burnout inventory, and Organizational Injustice scale.

Distinct models for men and women were constructed to test the relationships among all study variables using structural equation modelling (SEM). Both models showed an adequate fit to data (men: $\chi^2(8)=11,061$; $p=0,198$; RMSEA=0,036; women: $\chi^2(3)=1,945$; $p=0,584$; RMSEA=0,00). The analysis of the results yielded different impact of three components of commitment on professional burnout through organizational injustice as a mediating variable. Additionally, the model for women had more complex and stronger effects compared to men.

More specifically, organizational injustice had a mediating effect between organizational commitment and burnout in the sample of women. Affective commitment was found to have a significant negative effect on professional burnout for both samples. Whereas continuous commitment positively affected professional burnout. Therefore, continuous commitment may enhance the probability of perceiving injustice and can lead to a higher rate of employee burnout while affective commitment may defend employees from emotional exhaustion and cynical behaviour.

Treatment of Food Cravings in Overweight and Obese Adults: A Comparison of Emotional Freedom Techniques and Cognitive Behavioural Therapy with 6-month follow-up

Peta Stapleton¹, Brett Porter², Terri Shledon²

¹Bond University, Robina, QLD, Australia, ²The Lakeside Rooms, Robina, QLD, Australia

Obesity is a chronic disease estimated to account for between 0.7% and 2.8% of a country's total healthcare expenditures. Food cravings frequently lead to consumption of the craved food, are positively correlated with BMI and obese adults report preferences for high fat foods, therefore addressing these cravings in treatment is paramount. This study examined treatment of food cravings in 84 overweight or obese adults. Research examining cognitive and somatic procedures (e.g. Emotional Freedom Techniques, EFT) for food cravings has recently found significant improvements occurred in weight, body mass index, food cravings, subjective power of food, craving restraint and psychological coping for participants from pre- to 12-months after a 4-week treatment ($p < 0.05$). This randomised clinical trial extended this work and compared EFT for food cravings, to a gold standard treatment strategy, Cognitive Behavioural Therapy (CBT), in addition to a non-clinic comparison group.

A total of 88 adults were randomly allocated to either the EFT (N=52) or CBT (N=36) treatment program and completed an 8-week treatment program, and compared to 66 non-clinic comparison group. Degree of food craving, perceived power of food, restraint capabilities and psychological health symptoms were assessed pre- and post- an 8-week treatment program (repeated measure ANOVA), and at 6- and 12-month follow-up. EFT was associated with a significantly greater improvement in food cravings, the subjective power of food, craving restraint and depression symptoms from pre- to immediately post-test ($p < 0.05$). Body Mass Index (BMI) was also significantly reduced at 6-months. These results were maintained at follow-up points, with the exception of restraint, which remained stable, and anxiety which remained in the normal range. The CBT treatment was associated with a significantly greater improvement in the same measures, but also including BMI from pre- to immediately post-test ($p < 0.05$).

In sum, from pre-to post evaluation, the EFT treatment was shown to be as effective as the gold standard CBT, however at 6-months there was a between group difference (MANOVA) indicating EFT was superior than CBT for increasing willpower over food. Twelve-month data will be presented at the conference.

The General Practitioner – an Endangered Professional Group

Marie Gustafsson Sendén, Ann Fridner
Stockholm University, Stockholm, Sweden

Objective: General practitioners are responsible for the basic health care of patients and if necessary, to guide patients within the medical system towards specialist care, fulfilling the role of the "gatekeeper". However the shortage of doctors resulting in unfilled vacancies in the outpatient departments of hospitals has become a problem for quality of care and well-functioning health care delivery. Doctors who are psychologically stressed are more likely to make medical mistakes, show a lower level of empathy, are more dissatisfied with their work, and think more often of quitting their jobs or taking up early retirement.

The purpose of the study is to examine the relationship between doctors' health, the organization in which they work, and the desire to stay on or quit working as a specialist general practitioner.

Method: A cross sectional survey in 2013 among General Practitioners (GPs) employed in one City Council in Sweden. The criterion variable "intention to quit" was measured on a scale with three items ($\alpha = .86$; QPS-Nordic; Lindström et al, 2000). Exhaustion was measured by

Oldenburg Burnout Inventory, OLBI, ($\alpha = .82$; Demerouti et al., 2001, 2003), “support from the organization” was measured also by scales from the QPS-Nordic ($\alpha = .87$). Scales about “vacancies” ($\alpha = .90$) and “economic goals” ($\alpha = .86$), were created within the project. For the analyses we used hierarchical multiple regression.

Results: Altogether 193 (63.9%) female GPs and 109 (36.1%) male GPs answered the questionnaire, 44% response-rate. The results showed that analysed factors contributed to (50.6%) of unique variance in the physicians’ intention to quit. Physician exhaustion was included in the first model and accounted for 33% of the variance. All the subsequently introduced models added significantly to the “intention to quit”, specifically: “vacancies” (9.6%), goal (2.1%) and “support from the organization” (5.2%).

Conclusion: The results show that there are strong associations between physician’s level of exhaustion and their intention to quit their work as physicians. The results are important since they show that organizations need to pay attention to resource planning, and how economic goals are introduced in the organizations. A positive aspect is that support from the organization seems to be a protective factor. This is something that organizations could take on board to buffer against these outcomes.

Is the Burnout Process a Process of Depression? A Categorical Approach

Renzo Bianchi¹, Eric Laurent¹, Irvin Sam Schonfeld²

¹University of Franche-Comté, Besançon, France, ²The City College of the City University of New York, New York, NY, USA

Introduction: Burnout is usually defined as a combination of emotional exhaustion, depersonalization, and reduced personal accomplishment resulting from chronic occupational stress. Because of etiological similarities and shared features, distinguishing burnout from depression is challenging. The objective of the present study was to examine whether changes in burnout symptoms are relatively independent from changes in depressive symptoms or systematically accompany them.

Method: A total of 5,575 teachers were included in the study. Burnout was assessed with the Maslach Burnout Inventory (MBI). The MBI is considered the ‘gold standard’ for the measurement of burnout. Depression was assessed with the 9-item depression-dedicated module of the Patient Health Questionnaire (PHQ-9). The PHQ-9 directly targets the nine major depression diagnostic criteria specified by the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; American Psychiatric Association, 2013). The teachers were divided into six groups based on their MBI score (group 1: 0.00-0.99 [$n = 723$]; group 2: 1.00-1.99 [$n = 1672$]; group 3: 2.00-2.99 [$n = 1675$]; group 4: 3.00-3.99 [$n = 1031$]; group 5: 4.00-4.99 [$n = 407$]; group 6: 5.00-6.00 [$n = 67$]). Data were processed by using analyses of variance and *post hoc* Tukey’s test. Group membership constituted the independent variable. The global depression score and the scores related to each of the nine major depression diagnostic criteria constituted the dependent variables. The statistical significance threshold was lowered to .0025 in consideration of the multiple comparisons.

Results: Analyses of variance revealed an effect of the group on the depression-related variables. For all ten dependent variables, only significant between-group differences emerged except in one case, namely, when group 1 was compared with group 2 on the ‘suicidal ideation’ major depression diagnostic criterion. Overall, depressive symptoms were found to gradually increase from group 1 (minimal burnout) to group 6 (maximal burnout).

Conclusion: In the present study, increase in burnout symptoms was accompanied by an increase in depressive symptoms. No feature of depression (cognitive, affective, or somatic) was found to escape this trend. Explaining these results in terms of co-morbidity would seem inappropriate given the current failure to establish a clear *clinical* distinction between burnout

and depression and the absence of a consensual classification of burnout at a nosological level. Our findings are compatible with the idea that the burnout process essentially reflects a process of depression.

The Influence of Workload on Health: The Moderator Role of Transformational Leadership.

Estela M. Pardos-Gascón, Hugo Figueiredo-Ferraz, Marta Llorca-Pellicer, Pedro R. Gil-Monte
University of Valencia, Valencia, Spain

Nowadays workload is the most common psychosocial risk in the great majority of companies (Altaf & Awan, 2011). Recent studies have found a relationship between workload and health disorders including depression (Ganster & Rosen, 2013), headaches, stomachaches, anxiety (Shultz et al., 2009) or diabetes (Toker et al. 2012). On the other hand, transformational leadership has been related reduced health disorders and increases in job satisfaction (Hetland et al. 2007; Green et al., 2011). Transformational leadership is characterized by changing the values, beliefs and needs of followers to motivate them to perform to higher expectations and it is a leadership style which can generate job satisfaction (Bass, 1985). Therefore, both workload and transformational leadership have been related to health disorders, but each one of them has a different effect on this variable. Moreover, recent studies have found a moderating role of transformational leadership on the relationship between some psychosocial risks and health disorders (Ayoko & Callan, 2010).

The purpose of this study was to analyze the moderator role of transformational leadership on the relationship between workload and psychosomatic disorders. The sample consisted of 408 Spanish employees working with people with intellectual disabilities. Workload was estimated by the UNIPSIICO subscale (6 items, $\alpha = .75$; e.g., I do not have enough time to get the job done). Psychosomatic disorders were measured by the UNIPSIICO subscale (9 items, $\alpha = .87$; e.g., Do you have a headache?). Moreover, a reduced version of the scale of Bass and Avolio (1995) -including the four dimensions: individualized consideration, intellectual stimulation, inspirational motivation, idealized influence- was used to evaluate transformational leadership (12 items, $\alpha = .96$). In order to testing our hypothesis, descriptive statistics, correlation and regression analysis were conducted in SPSS 21.0.

The results show that transformational leadership has a moderating role in the relationship between workload and psychosomatic disorders (interaction variable Workload x Transformational leadership, $\beta = -.29$, $p = .013$; Change $R^2 = .011$, $F = 6.25^*$). Therefore, in environments characterized by high job overload, if employees perceive that managers are developing a transformational leadership style, the levels of psychosomatic disorders will be lower relative to the absence of this leadership style.

This study provides support for the case to intervene in preventing psychosomatic disorders caused by job overload. The findings suggest management training in transformational leadership style may be a fruitful avenue to explore.

The Moderating Role of Socioeconomic Status in the Relationship between Exposure to Interpersonal Conflicts at Work and Psychological Distress: Exploration of Gender Differences

Nathalie Lanctot^{1,2}, Aline Drapeau^{1,2}, Stephane Guay^{1,2}

¹*Universite de Montreal, Montreal, Quebec, Canada*, ²*Institut universitaire en sante mentale de Montreal, Montreal, Quebec, Canada*

Interpersonal workplace conflicts are found to be an important stressor that significantly contributes to the risk of having higher psychological distress. It has also been demonstrated that people with low socioeconomic status (SES) have higher level of psychological distress. However, it is not clear how the SES (income, education, employment) may moderate the

association between exposure to interpersonal conflicts at work and the vulnerability in terms of psychological distress, and if this relationship differs between male and female workers. The general aim of this study was to compare the exposure and vulnerability of male and female workers to interpersonal conflicts at work according to their SES.

A cross-sectional study was conducted with a total 3,906 employees. Analyses were conducted separately for women and men. Hierarchical regression was used to examine the hypotheses.

Results demonstrated that SES is a significant moderator of the relationship between exposure to interpersonal conflicts at work and psychological distress. In workers less exposed to interpersonal conflicts, those with a low SES reported a lower mean level of psychological distress than those with a high SES; whereas in workers highly exposed those with a low SES reported a higher mean level of distress than those with a high SES. The direct effect of interpersonal conflicts at work was greater for women ($\beta = 0.77$) than for men ($\beta = 0.55$) and the interaction was smaller for women ($\beta = 0.20$) compared to men ($\beta = 0.30$). However, these differences were not statistically significant. Gender differences emerged when adding control variables in the model (psychological demands, decision latitudes, social support and job insecurity). Hence, the moderating role of SES plays a significant role in predicting psychological distress of male workers even when controlling for other work stressors. Yet, for women, when adding the control variables in the model, not only does the direct effect of interpersonal conflicts at work cease to play a significant role, but so did the SES and the interaction term. Thus, for female workers, the moderating effect of SES loses its significant role in predicting psychological distress, when other works stressors are added to the model.

Interventions that specifically address interpersonal conflicts at work should be aimed specifically at men and a special attention should be put in place on interventions that address work constraints for women.

Does Emotional Suppression Moderate the Effects of Aggression at Work on Counterproductive Work Behaviours?

Lukasz Baka¹, Dorota Szczygiel², Roza Bazinska²

¹Jan Dlugosz University, Czestochowa, Poland, ²University of Social Sciences and Humanities, Warsaw, Poland

Introduction: Counterproductive work behaviours (CWB) are presented in the literature as either a form of retaliation or a form of a defence mechanism in the response to chronic job stressors. Regardless of the theoretical context, a significant role in the forming of CWB is attributed to negative emotions. Results of previous studies on the Stress-Emotion model (Spector et al., 2005) have indicated that link between job stressors and CWB is mediated by negative emotions or moderated by affective disposition. It is especially evident in the case of social stressors, including aggression at work. However, no studies have tested the role of emotional suppression as a moderator of the link between stress and CWB. Does the tendency to suppress negative emotions in response to job stressors intensify or reduce CWB?

Objective: The aim of the study was to investigate the direct and moderated by emotional suppression effects of aggression at work (from supervisors and co-workers) on CWB. We expected that emotional suppression would intensify the direct effect of aggression at work on CWB.

Methods: Data was collected among 244 Polish hospital staff (76% female). The regression analysis with interactional effects was applied to test the research hypotheses. The Aggressive Experiences Scales (Glomb, 2001) was used to measure aggression from supervisors and

from co-workers. The Courtauld Emotional Control Scale (Watson & Greer, 1983) was applied to evaluate tendency to suppress three negative emotions, including anger, anxiety and unhappiness. CWB were measured with the Counterproductive Work Behavior-Checklist (Spector et al., 2006).

Results: The results confirmed positive relationships between aggression at work and CWB. The moderating function of emotional suppression was partially confirmed. Specifically, each kind of suppressed emotion produced a specific set of consequences for CWB. As it was expected, suppression of anger intensified effects of aggression from supervisors and co-workers on CWB. However, suppression of anxiety buffered (not intensified) only the effect of aggression from supervisors on CWB. Suppression of unhappiness did not moderate the link between aggression at work and CWB.

Discussion: Results partially support the notion of the Stress-Emotion model and provide further insight into processes leading to CWB. Emotional suppression may be considered as the moderator in this model. Nevertheless, the exact role of emotional suppression requires further study.

Problems in the Training of Occupational Mental Health Practitioners in Japanese Graduate Schools Certified Training Courses for Clinical Psychologists

Yasumasa Otsuka

Department of Psychology, Graduate School of Education, Hiroshima University, Hiroshima, Japan

For decades, occupational mental health issues have been big problems in Japan. After 1998, around 8,000 Japanese workers committed suicide every year. Thus, the training of occupational mental health practitioners is an urgent issue in Japan, especially following revision of the Industrial Safety and Health Act in 2006. This study was conducted to investigate the current status of the training programs for occupational mental health practitioners in graduate schools that have a certified training course for clinical psychologists, and to make some recommendations for future training programs.

One hundred and sixty-seven Japanese graduate schools that have a certified training course for clinical psychologists were selected for this study. Forty-eight graduate schools (response rate = 28.7%) returned questionnaires regarding the number of teachers and graduate students, whether they have lectures or practical training in occupational mental health, the number of graduate students whose thesis for their doctor's or master's degree is related to occupational mental health, the number of graduate students who have some experience of occupational mental health (e.g., counselling for employees), and the number of graduate students who find work related to occupational mental health after finishing graduate school, up to August 2013.

The results showed that, among 349 teachers (201 professors, 98 associate professors, 39 lecturers, and 11 associate professors), 18 (5.2%) were experts in occupational mental health. Among a total of 1,236 graduate students, 22 (1.8%) had their thesis on occupational mental health and 7 (0.6%) had clinical experiences in occupational mental health. Twelve graduate schools (25.0%) had one or more courses related to occupational mental health and 7 (14.6%) provided clinical experiences in occupational mental health for their students. Between 2009 and 2013, 7.6 graduate students on average found a job related to occupational mental health.

From these results, poor curriculum content and human resources for occupational mental health were revealed in Japanese clinical psychology training courses. Nonetheless, some graduate students found jobs and worked as occupational mental health practitioners without adequate training. The development of a more adequate curriculum is urgently needed.

Perceptions of Emotional Labour: A Preliminary Study from a Kenyan Sample

Mbusiro Chacha

United States International University, Nairobi, Kenya

Background: Emotional labour involves employees managing their emotions so as to express emotions that adhere to the work rules. Research on emotional labour has greatly focused on samples from various cultures in the west and the east.

Purpose: To determine if the concept of emotional labour and its three components comprising of Surface Acting, Deep Acting, and Emotional Dissonance, is evident in Kenya as defined by the literature. The study will also determine how Kenyans perceive emotional labor. Further, the aim of this research is to set the stage for a more comprehensive study of emotional labour in the Kenyan workforce.

Methods: The study will adopt a qualitative research design utilizing in-depth interview questions. Interviews will be administered to employees at a local university whose jobs involve customer service. Respondents will be asked open-ended questions that will be linked to the components of emotional labor; deep acting, surface acting, and emotional dissonance. The questions will also be designed to measure the understanding and interpretation of Emotional Labour. The interviews will be recorded and analyzed using Thematic Analysis.

Results: Prospectively, the researchers expect that the concept of emotional labour will be evident as a construct defined in the literature, among the Kenyan sample. We expect the results to unveil the perceptions of emotional labour in Kenya.

Conclusions: Emotional labour is a construct about which little to no research has been done in Kenya. To this end, the researchers are conducting a preliminary study that will investigate and explore the existence of the construct and its domains, in order to facilitate a more comprehensive study on emotional labour in the future. The researchers expect that the results of the study will concur with the literature, about the structure of emotional labor.

Relationship between Spiritual Values and Psychological Capital among University Employees

Shahin Zehra, Akbar Husain

Aligarh Muslim University, Aligarh, Uttar Pradesh, India

There are no greater treasures than spiritual values of the employees for their development and organizational development. Psychological capital provides a combined construct as a main contributor to the competitive advantage of organizations. The construct adds the value of positive psychological resources to the existing best measure of organizational worth, comprised of the more established constructs of social capital, human capital, and traditional physical and financial capital.

The present study examined the relationship between spiritual values and psychological capital among 100 school teachers and 100 non-teaching staff of Aligarh Muslim University, Aligarh, India. The Spiritual Values Scale developed by Husain, Zehra and Jahan (in press) and Psychological Capital Questionnaire of Luthans et al. (2007) were administered to participants. The data were analyzed by means of Cronbach alpha and multiple regression analysis. Cronbach alpha for the total sample was found to be 0.947. Significant positive correlation coefficients were found between spiritual values and self-efficacy, spiritual values and hope, and spiritual values and psychological capital among males, females and non-teaching staff members. Significant positive correlations were also found between spiritual values and self-efficacy, spiritual values and hope, spiritual values and resilience, spiritual values and optimism, and spiritual values and psychological capital among university employees.

The Gaps between Vocational Interests of Youngsters and Labour Market Demands

Marija Molan¹, Martin Molan²

¹University Medical Centre Ljubljana, Slovenia, ²Gimnazija Bežigrad, Ljubljana, Slovenia

Introduction: One of the greatest problems in the EU labour market is the huge gap between labour market demands and vocations of newcomers at the labour market, which in turn is reflected in the structural unemployment. According to previous research, workers less satisfied with their vocational choice report lower levels of well-being. This research therefore sought to compare vocational wishes of youngsters with labour market demands in Slovenia in 2012.

Method: A vocational interests' questionnaire was composed based on the Holland's theory of vocational choice. Data on registered unemployed was then collected from the Slovenian employment authority. The sample consisted of pupils (15-18 years old) from selected Slovenian secondary schools (N = 210).

Results: Comparison of obtained data identify gaps between labour market offers and needs. There was only a modest intersection between two groups.

<p>According to the results, the most popular vocations among pupils, with stable interest from the age of 12 years were:</p> <ul style="list-style-type: none"> • physicians • lawyers • teachers • physics • sport trainers • architects • biologists • managers • chemists 	<p>The most popular vocation interest areas were:</p> <ul style="list-style-type: none"> • working with people • technics • management and administration <p>The most unpopular vocational interest areas were:</p> <ul style="list-style-type: none"> • informatics • food supply • commerce
<p>According to data from the unemployment register, unpromising vocations with modest chance to achieve employment at the labour market were:</p> <ul style="list-style-type: none"> • lawyer • teachers • sport trainers • architects • managers • physicians 	<p>Vocation with good possibilities to get a job were:</p> <ul style="list-style-type: none"> • information engineers • workers in food supply chain • technical workers for production

Conclusion: Desired professions are often professions with poor employment possibilities. Youngsters coming into the labour market have two possibilities: to be unemployed or to take a job not related to their interest or chosen profession, which can lead to lower motivation. To prevent future demotivation and depression, in-time vocational counselling should be introduced. To achieve balance between labour market needs and offers, untraditional or less known vocations, pupils should be made aware of such professions early on, when their vocational interests are being developed.

Prevalence, Determinants and Interventions to Prevent Sickness Presenteeism among Physicians in Academic Medicine: The European HOUPE Study and the Nordic NOS-HS Study

Lise Løvseth^{1,2}, the HOUPE study group¹, the NOS-HS study group², Per Øystein Saksvik²

¹Dept. of Research and Development, St Olavs University Hospital, Trondheim, Norway,

²Institute of Psychology, Norwegian University of Science and Technology [NTNU], Trondheim, Norway

Background: National and international studies show a persistent high prevalence of sickness presenteeism among academic physicians. This behaviour affects health services provided to patients, human resources and organizational economics. Despite decades of a high

prevalence of presenteeism among physicians there is lack of knowledge on determinants of this behaviour to enable appropriate work design and occupational stress interventions. This could be due to lack of focus on the balance between presenteeism based on attendance pressure, versus work as a remedy and positive influence on health and health complaints.

Aim: To investigate 1) the prevalence of presenteeism among physicians based on survey data from the HOUPE study, 2) when working whilst ill is perceived as negative to the physician, the health services provided and consequently the patient based on in-depth interviews with hospital physicians, and 3) to perform an organizational intervention that benefits both parties and investigates the effect of these interventions with repeated measures by means of the NOS-HS study.

Method: Survey data from 1) 3,500 physicians from four countries participating in HOUPE phase I (2005) and 2) 6,500 physicians from seven European countries participating in HOUPE phase II (2012), 3) in-depth interviews with physicians (N=20) at a Norwegian university hospital and 4) organizational intervention based on the NOS-HS study with repeated measure with a control group/specific care units in a Norwegian university hospital. The groups are given a self-completion questionnaire before (M0), shortly after the intervention (M1) and 6 months after the intervention (M2). The questionnaire will measure the process and effects of the intervention.

Results: The study has identified the prevalence of presenteeism among physicians and determinants in the organization, work environment, management and organizational culture associated with this behaviour. The qualitative data show that the interaction between professional culture, work conditions and work-family interaction affects presenteeism and work attendance among physicians. Preliminary results suggest a variety of interventions from small interventions such as an 'open door' policy and improved informal and formal daily leader communication, to large scale structural changes in the organization. Based on these results we have designed a small scale intervention and will measure its effect by means of the NOS-HS study to maintain work satisfaction and reduce presenteeism among physicians.

The HOUPE Study Phase I (2002-11) and II (2012-18): Health and Organization among University Hospital Physicians in Europe

Lise T Løvseth¹, Ann Fridner², The HOUPE study group^{1,2}, Marie Gustafsson Senden³

¹*Dept. of Research and Development, St Olavs university Hospital, Trondheim, Norway,*

²*Department of Psychology, Stockholm University, Stockholm, Sweden,* ³*Karolinska Institute, Sweden*

Background: Medical academics are trained as medical practitioners' and scientists. Their high workload combined with concern for patients and colleagues, and responsibilities associated to family- and social life can compromise sufficient self-care, restitution and rest. Exposure to high, and often, conflicting demands can compromise physicians work satisfaction, health and wellbeing. Growing evidence points to major negative consequences of physician's ill-health to healthcare systems by affecting recruitment and retention of physicians, workplace productivity and efficiency, and quality of patient care and patient safety in terms of medical errors, recovery and treatment adherence. No sufficiently powered, comprehensive international study that includes different levels of organizational data has been conducted.

Aim: To conduct a sufficiently powered international longitudinal study with different types of organizational data on determinants in the organization, work environment, management and organizational culture to investigate the prevalence, interaction, manifestation or the effect of strain among physicians in academic medicine as a basis for both scientific knowledge and organizational interventions.

Method: Longitudinal data by 1) Document analysis of national framework and policy, 2) Hospital statistics of their work force, 3) in-depth interviews and prospective survey data from 4) N = 3,500 physicians from HOUPE phase I and 5) N = 6,500 physicians of HOUPE phase II in all partner countries. The survey data was collected in 2005 with repeated measure of survey data in 2012.

Participants: All physicians permanently employed at each University Hospital at the time of data collection. Phase I: The participants were university hospital physicians in Sweden (N= 2,300), Norway (N= 800) Iceland (N= 400) and Italy (N= 900). Phase II included all four countries of phase I in addition to university hospital physicians from Hungary (N= 800), the Netherlands (N= 800) and Austria (N= 500).

The questionnaire comprised 110 items altogether with the following measurements: 1) Physician Career Path Questionnaire (PCPQ), 2) The General Nordic Questionnaire for Psychological and Social Factors at Work (QPSNordic), 3) Patient confidentiality and personal support (CBS), 4) Mini Oldenburg Burnout Inventory (MOLBI) 5) General Health Questionnaire (GHQ-12), 6) Work-Family conflict and 7) relevant demographic information.

Results: Results have contributed to empirical knowledge into the processes and mechanisms that affects physicians' career, work conditions, satisfaction and health. Information about the character of work conditions and career choices of physicians have provided a basis for organizational interventions to make each university hospital more resource efficient and innovative through professional and organizational culture, conditions of employment and work, and health services provided.

What Work Factors are Important for Researchers' Well-Being and Presence at Work?

Hedvik Haaheim-Simonsen^{1,2}, Steffen Torp², Hege Forbech Vinje²

¹The Occupational Health Service, Diakonhjemmet Hospital,, Oslo, Norway, ²Buskerud & Vestfold University College, Tønsberg, Norway

Objectives: The work of researchers is characterized by high quantitative and qualitative demands and rather high decision latitude. In addition, it is most often project-based, with deadlines. Overtime work is well-known among this group of workers. The objective of this study was to investigate what work factors researchers experience as important for their well-being and presence at work.

Methods: Eight researchers employed in one independent research institution in Norway were given in-depth interviews regarding their work and experiences related to their well-being and presence at work. Interviews were content analyzed by categorizing main themes in meaningful units.

Results: Overall, performing high-quality research was closely connected to the informants' well-being and presence at work. Four main themes connected to high-quality work, well-being and presence were identified: Job demands, decision authority, support and meaningful work. High academic demands and tight time-limits were regarded as positive and important. High non-academic demands, such as administrative job tasks, were regarded as highly negative if intervening with the academic goals. The researchers reported high decision authority and claimed that the possibility to work at home when not feeling well was important for being an efficient worker. The researchers did not need much emotional support at work, but emphasized the need for access to good structural, evaluative and academic support. The main theme "meaningful work" comprised two units; producing useful products for the clients and the society as a whole, and the possibility to achieve the researchers' own academic potential.

Conclusion: It seems that researchers are highly engaged in their research. The most important aspect in promoting well-being and presence among this group of workers is to organize work in such a way that the workers are able to concentrate on core work tasks and thereby produce high-quality research.

A Field-Based Study of Wildland Fire-Fighters Aimed at Assessing Physiological and Psychological Factors Contributing to Mental and Physical Fatigue

Céline Boudreau-Larivière^{1,2}, Sandra Dorman^{1,2}, Ayden Robertson^{1,2}, Zachary McGillis^{1,2}, Michel Larivière^{1,2}, Alison Godwin^{1,2}, Tammy Eger^{1,2}

¹Laurentian University, Sudbury, Ontario, Canada, ²Centre for Research in Occupational Safety and Health, Sudbury, Ontario, Canada

Wildland fire-fighters are at an increased risk of physical and mental fatigue due to job demands, extended hours and rough environmental work conditions which may increase personal errors, leading to injury. This investigation is aimed at assessing some controllable determinants of fatigue in a population of wildland fire-fighters with the objective of proposing strategies to mitigate fatigue, to optimize work conditions and therefore improve worker safety. By using a field-based methodology, we will examine injury-risk by quantifying factors that impact fatigue. Specifically, we propose to measure the quantity of: sleep, physical exertion, kilocalories consumed, and stress- and recovery-time experienced by fire-fighters during deployment. We will also document sleep quality, nutritional quality and personal factors. These proposed variables have never been studied simultaneously in a group of workers exposed to both a physically- and mentally-challenging work environment.

Sleep quality and quantity will be determined using the ActiSleep Monitor. This device delivers objective, accurate sleep measurements for each sleep episode, including onset, latency, total sleep time, number of awakenings and ambient light. Energy expenditure and physiological indicators of stress, recovery and physical activity will be measured using the Firstbeat Heart Rate Variability Monitor. This device provides objective, physiological measurements that can be tracked over 24-hour periods of work, leisure and sleep. Nutritional parameters will be assessed using digital photography and personal journals. Participating fire-fighters will be asked to photograph their meals and enter verbal quantity estimates using personal tablets. This food data will be entered into Nutribase Pro10, a nutrition-analysis software. Personal factors including personality profile and general health will be determined by administering the NEO-PI-3 and the SF-36 questionnaires respectively. Self-reported fatigue levels will be measured daily at wake-time and bedtime using two short questionnaires measuring fatigue. The first is a single-item measure of daily fatigue and the second is the short form of the Profile of Mood States. Finally, the extent of perceived recovery will be assessed at the beginning of each workday by administering a recovery questionnaire.

The resulting field study data will inform employers and occupational health and safety experts of potential management opportunities to reduce fatigue amongst wildland fire-fighters with the intent of improving the safety of workers and reducing injuries and accidents in this workforce. Based upon the results of this proposed study we will develop potential workplace intervention strategies.

The Professionalization of Non-Profit Organizations: A Threat for Volunteers' Wellbeing?

Edwine Goldoni¹, Donatienne Desmette¹, Ginette Herman¹, Tim Vantilborgh²

¹Université catholique de Louvain, Louvain-la-Neuve, Belgium, ²Vrije Universiteit Brussel, Brussel, Belgium

Recent studies show that non-profit organizations (NPOs) are turning more professional (e.g., Vantilborgh et al., 2011). For example, they adopt for-profit management practices (e.g., using indicators of efficiency) and strengthen professional competence of their volunteers (e.g.,

through trainings). This affects individual working conditions. Previous studies using the Job Demands-Resources (JD-R) model have stressed the importance of job demands and resources to understand volunteers' wellbeing and organizational outcomes such as retention in NPOs (e.g., Huynh, Winefield, Xanthopoulou, & Metzger, 2012). Surprisingly, the effects of the professionalization of NPOs on volunteers' working conditions have been neglected. The aim of this study is to bridge this gap by examining the influence of the professionalization of NPOs on volunteers' job demands and resources as well as its organizational and individual consequences.

Ninety volunteers filled in a questionnaire in a Belgian Voluntary Congress. The professionalization of NPOs, (cognitive and emotional) job demands, (cognitive and emotional) job resources, satisfaction at work, determination to continue and organizational-based self-esteem (OBSE) were measured. Results of bootstrap analyses show that the professionalization is positively associated with cognitive and emotional demands but not with cognitive and emotional resources. Furthermore, exploratory analyses show that the relationships between the professionalization and satisfaction, determination to continue and OBSE are fully mediated by perceived conflict with paid workers. This mediating effect of perceived conflict, however, disappears when emotional resources are controlled for, confirming the buffering role of these resources in conflict at work.

These findings and their implications regarding volunteers' wellbeing and NPOs efficiency will be discussed.

Good Practices in Promoting Mental Health in the Workplace across WHO Regions: A Review and Evaluation

Kelly Calliope Sivris, Stavroula Leka, Evelyn Kortum

¹University of Nottingham, Nottingham, UK, ²University of Nottingham, Nottingham, UK, ³World Health Organization, Geneva, Switzerland

Background: The impact of poor mental health in the workplace is severe. While attention has been paid to occupational health and safety and risk management and workplace health promotion, mental health protection and promotion have received much less focus while psychosocial risk management has not yet been fully incorporated in such efforts. This paper presents a review of good practices, barriers and opportunities for workplace mental health promotion (WMHP) across WHO regions. Eleven good practice initiatives/tools for WMHP across WHO regions were included in the study with a view to provide a balanced perspective across countries.

Methods: Semi-structured interviews were conducted with seventeen experts who were selected on the basis of their knowledge and expertise in relation to the identified tools. Interviewees were asked to evaluate the approaches on the basis of the WHO model for healthy workplaces and the mental health action plan.

Results: It was found that good practice for WMHP is in line with the principles and the five keys of the WHO model for healthy workplaces. Additionally, the findings support the third objective of the mental health action plan for multi-sectoral implementation of WMHP strategies. All the initiatives are functioning programmes of multi-sectoral/national mental health promotion and prevention in the workplace. The good practices included engagement of all stakeholders and their representatives, science-driven practice, dissemination of good practice, continual improvement, and evaluation. Challenges included knowledge deficiency, financial constraints, cultural gaps, time pressure and fear. Lastly, potentials for future success were: informing policies/legislation, education on psychosocial risks and WMHP, provision of better evidence, and the implementation of a holistic approach.

Conclusion: The study identified commonalities in good practice approaches in different countries and stressed the importance of a strong policy and enforcement framework as well as organizational responsibility for WMHP. For progress to be achieved in this area, a holistic approach and multidisciplinary were unanimously suggested as a way to successful implementation.

The Development of Burnout Process: A Study in Teachers

Beatriz Rabasa, Pedro R. Gil-Monte, Marta Llorca-Pellicer, Estela M. Pardos-Gascón
University of Valencia, Valencia, Valencian Community, Spain

Background: Burnout is a psychological response to chronic work-related stress of an interpersonal and emotional nature that appears in professionals in service organizations who work in direct contact with the clients or users of the organization (Gil-Monte, 2005). Burnout in teachers has received increasing attention by researchers and scholars, as its severity among teaching professionals has made teaching a profession at high risk of developing this syndrome. Teachers are vulnerable to a large quantity of psychosocial stressors, including role ambiguity (Papastyliaou, Kaila & Polychronopoulos, 2009) and job overload (Shirom, Nirel, & Vinokur, 2006).

The theoretical model underlying the Spanish Burnout Inventory (SBI) (Gil-Monte, 2011) describes two patterns in the development of burnout. In both, attitudes and behaviours of indolence can be viewed as a coping strategy used to deal with cognitive (i.e., lower enthusiasm toward the job) and emotional (i.e., psychological exhaustion) deterioration. However, while for some professionals this coping strategy allows them to manage the levels of strain, other professionals feel uncomfortable with it and develop feelings of guilt (Gil-Monte, 2008). The occurrence of burnout in teachers affects the educational environment and interferes with reaching pedagogical objectives, leading professionals to a process of alienation, cynicism, apathy, health problems, and the intention to abandon the profession.

Purpose: The purpose of this study was to investigate the mediating role of feelings of guilt in the relationship between burnout and inclination towards absenteeism. Hypotheses were tested by structural equation modelling.

Methodology: The study sample was composed of 120 high school teachers (35.5% men). Job overload, role ambiguity, and inclination towards absenteeism were assessed by the UNIPSICO subscales. Burnout was evaluated by the SBI.

Results and Conclusions: The Hypothesized model yielded an adequate fit to data according to: GFI = .963, RMSEA = .070, NNFI = .906, CFI = .951. In the Hypothesized model, all the paths were significant at $p < .05$ with exception of the relationship between enthusiasm toward the job and guilt ($\beta = .11$, $p > .05$). The results support the specification of the burnout process according to the model designed by Gil-Monte (2005; 2008). A limitation of the present study is that it does not provide definitive answers about the direction of causality. Regarding the practical contributions, the current study may advance the knowledge of burnout, and may also contribute to its prevention.

The Customer as Psychosocial Work Environment

Ingrid Schéle, Esther Hauer, Erik Lundkvist, Susanne Tafvelin, Kristina Westerberg, Maria Nordin
Umeå University, Umeå, Sweden

Interacting with known, as well as new, customers is a substantial part of a retail salesperson's workday, and can be a source of pride and joy or stress and inadequacy. This makes customer interaction an important part of the psychosocial work environment in retail. Research is scarce on how retail salespeople perceive customer interaction and the resources

available to them in reaching a mutually satisfactory conclusion in terms of both sales and emotional states. There is a similar lack of research on the relationships between customer interaction and mood, stress, health and well-being. Emotional work, the need to adapt emotional expression to work related demands, has been acknowledged as a factor that can affect employee health negatively. Moreover, previous research has shown that the organizational context and the way the work is organized play important roles in health promotion and sickness prevention. To our knowledge, no studies have explored the interrelations between organizational context and emotional work in retail.

This proposed Swedish study will contribute to the development of knowledge regarding improving future health promotion organizational interventions directed at salespeople, and in the long-term reduce their work-related sick-leave. We aim to explore the relationship between how customer interaction is perceived and the resources and demands present in these interactions, as well as the outcomes of these interactions in the form of perceived stress, health, and well-being. The relation between positive and negative customer interactions, aforementioned resources and demands, the salespeople's emotional state and anticipations regarding future customer interaction will be explored with cognitive interviews (n=25). The interview data will be presented in the form of typified narratives - a person oriented rather than variable oriented approach. These narratives will be developed into a psychometric instrument that will add valuable contextual information to our consecutive survey study (n=600). The survey will provide data on the perception of customer interaction, resources available to salespeople (including competence and social support), work related demands, emotions, stress, health and well-being. We intend to analyze the survey data with multilevel structural equation modeling (SEM), a variable oriented approach, and explore both the survey data and the typified narratives together with latent profile analysis in a person oriented approach. A gender perspective will permeate all analyses. This study offers, besides additional knowledge, a new methodological take on the psychosocial work environment and its influence on the health and well-being of retail salespeople.

The Emotional Nature of Customer Service Work and its Effect on Job Burnout

Roza Bazinska¹, Lukasz Baka², Dorota Szczygiel¹

¹*University of Social Sciences and Humanities, Warsaw, Poland,* ²*Jan Dlugosz University, Czestochowa, Poland*

Introduction and Objectives: Recent research has demonstrated that employees' negative emotions during interactions with customers were positively related to burnout. Another line of research has examined the effect of emotional labour (EL) on burnout. EL is the process by which employees manage their true feelings in order to display organizationally desired emotions. Employees can manage emotions to meet work role demands through deep acting and surface acting. Research shows that surface acting and deep acting differ in terms of their effects on individuals. Surface acting shows correlation with both emotional exhaustion and depersonalization. In contrast, deep acting is not associated with burnout. The aim of the study was to verify the hypothesis that surface acting (i.e., the expression of required emotions without changing one's true inner feelings) mediates the relationship between negative emotions and burnout.

Method: To test this hypothesis, we collected data from 214 Polish workers (76.60% female) employed in the service industry. Participants were on average 25 years old (M=25.97, SD=5.76). They were presented with a list of adjectives describing emotions and asked to rate the extent to which they experienced each emotion while interacting with a client. Participants were instructed to complete the list over four consecutive working days. EL was measured with the Polish EL Scale developed by Bazinska et al. (2010), which measures deep acting and surface acting. Burnout was measured with the Polish version of MBI (Pasikowski, 2004).

Results: To test our hypothesis, we conducted hierarchical multiple regression analyses on two aspects of burnout: emotional exhaustion and depersonalization. Predictor variables were entered into each regression analysis in three steps. Demographic variables in Step 1, positive and negative emotions in Step 2, and EL strategies (deep and surface acting) in Step 3. Negative emotions predicted both emotional exhaustion ($\beta=.38$, $p<.001$) and depersonalization ($\beta=.31$, $p<.001$). However, their significance diminished after EL strategies were entered into the regression analysis. Findings indicate that only surface acting significantly predicts emotional exhaustion ($\beta=.49$, $p<.001$) and depersonalization ($\beta=.54$, $p<.001$). Mediation analyses revealed that surface EL is a mediator between negative emotions and both emotional exhaustion and depersonalization. Negative emotions directly and indirectly (through surface acting) relate to emotional exhaustion and depersonalization.

Discussion: As in previous studies, negative emotions and EL were found to be related to burnout. However, this study extends previous findings by demonstrating that the relationship between negative emotions experienced while interacting with customers and burnout is mediated by EL.

Staying Engaged and Enthusiastic: Using the JDR to Understand Work Engagement amongst Employees in the Early Childhood Sector in Australia

Prudence Milllear, Simone Chong

University of the Sunshine Coast, Maroochydore, Queensland, Australia

Working in early childhood education and care in Australia is characterised by lower pay and high rates of turnover. The role itself can be physically and emotionally demanding, with risks that include exposure to common childhood viruses, injuries relating to lifting or sitting on child-sized furniture, and fatigue. However, women working in early childhood often state that they 'love' their work and derive great satisfaction from being able to assist in children's development and set the foundation for lifelong learning. To understand these complexities, the Job Demands-Resources (JDR) model was used to compare the relative merits of workplace resources and demands on early childhood staff. What aspects of the workplace help to maintain energy, motivation and engagement in early childhood educators? Also, can individual factors, such as coping style, or a person's intrinsic motivation, influence employee engagement beyond that of workplace resources alone?

Early childhood education employees (N = 219, 97% female) completed an online survey about their education, job responsibilities, resources and demands, engagement and burnout, coping preferences and intrinsic motivation. Most of the sample worked around 40 hours per week in long day care centres as directors (29%), group leaders (31%) or assistants (24%). The balance worked as kindergarten teachers. Interestingly, neither pay nor hours per week were related to work engagement or burnout.

A well-fitting path analysis ($X^2(7) = 1.061$, CFI = .999, RMSEA=.017) found that social support in the workplace had a positive effect on emotional exhaustion and employee engagement via the effects of lowered perceived workplace demands (e.g., working long hours) and higher perceived job rewards (e.g., 'I know the work I do is important'). Social support and job rewards were also important for the use of sharing-based coping among staff (e.g., 'I get emotional support from others') that in turn, led to higher employee engagement. Employees' intrinsic motivation also benefitted from the perception of social support and job rewards, but did not itself lead to higher engagement. Ultimately, the strongest predictor of engagement was the perception of job rewards whilst the strongest predictor of burnout was high job demands, thus lending support to the JD-R model in its original form.

Taken together, workplaces that offer a supportive environment, provide employees with the opportunity to maximise the rewards and social connection they get from their work, limit the perception of job demands, and through these effects benefit from a engaged and motivated workforce.

Organizational Climate and Job Satisfaction in Plastic Shoe Workers in Guadalajara, Mexico

Maria de Lourdes Preciado Serrano, Rogelio Vicente Gomez Sanchez, Juan Manuel Vasquez Goñi

Universidad de Guadalajara, Guadalajara, Mexico

Introduction: In Mexico, the shoe manufacturing industry is deeply rooted. However, the impact on GDP is approximately 3% in the last ten years. Currently this sector is made up of approximately five thousand workers (of which two thousand are in the plastic shoe industry). However, with the process of globalization and the increased importing of products, investment in this sector has decreased. This has resulted in low-wage, unemployment, and ultimately in negative effects on employees' health (INEGI, 2013). Psychosocial models identify organizational climate and job satisfaction as two important variables in the development of health of workers and the industry's productivity.

Objective: To identify the relationship between organizational climate and measures of job satisfaction.

Hypothesis: The organizational climate dimensions (autonomy, cohesion, trust, support, recognition, equity and innovation) are directly related to high levels of job satisfaction, while organizational climate is inversely related with pressure.

Methodology: This article presents a transversal and descriptive study by means of a survey conducted with workers in the plastic shoe industry in Mexico. Independent variable: Organizational climate as assessed by practices and procedures in the workplace. Dependent variable: Job satisfaction including pleasant feelings regarding supervision and work group cohesion. Instruments: Organizational Climate Test (Chaing-Vega, 2008) and Motivation and the Job Satisfaction Test (García-Peña, 2006). Ethical considerations: We surveyed all unionized workers, complying with Mexican law regarding human research (Ley General de Salud, 2013).

Results: 172 workers from different areas of production were surveyed. Overall, eight workers perceived organizational climate negatively (autonomy, trust, support and recognition); 70% were undecided and 25% consider it appropriate. It was reported that 42 (24%) of the participants felt unmotivated at work. Significant correlation was found between cohesion, innovation, support and recognition with job satisfaction.

Conclusions: We determined the direct relationship between some dimensions of organizational climate and job satisfaction. The hypothesis of inverse relationship between pressure and job satisfaction was unsupported. In general, workers do not know the work process, goals and priorities of the industry and organization. They perceived difficult peer relationships, lack of trust between themselves and the management. Recommendation: continue to investigate other factors related to job satisfaction.

Emotional Regulation Strategies and Burnout among Radiotherapy Workers: The Moderating Role of Perceived Organizational Support

Julie Laurent, Isabelle Bragard, Francis.P. Peree, Philippe Coucke, Isabelle Hansez

University of Liège, Liège, Belgium

Background: The emotional component of jobs involving "people work" is a topic of recent interest in the literature. Most authors consider two regulation strategies as central components of emotional labour: surface acting and deep acting (Brotheridge & Lee, 2003). Many studies have shown the negative impact of surface acting on well-being outcomes such as job strain and burnout (e.g. Brotheridge & Lee, 2003; Mann & Cowburn, 2005). Although little seem to be known about the role of organizational resources in these relations, Pisaniello, Winefield and Delfabbro (2012) have shown the moderating role of resources such as support in the relation between emotional regulation and job strain/burnout.

Aim: The aim of this study is to test the moderating role of perceived organizational support in the relation between emotional regulation and well-being outcomes among nurses and physicists working in the context of radiotherapy.

Methods: Ninety participants returned a questionnaire including the Emotional LabourScale (Brotheridge & Lee, 2003), the Maslach Burnout Inventory (Maslach & Jackson, 1986), the Positive and Negative Occupational States Inventory (Barbier, Peters & Hansez, 2010) and a scale measuring Perceived Organizational Support (POS) (Stinglhamber & Vandenberghe, 2003).

Results: Scores of emotional exhaustion and depersonalization corresponded to low scores while personal accomplishment corresponded to a medium score. The job strain level was also considered as moderate. Preliminary hierarchical regression analyses show that surface acting was positively significant in explaining job strain, emotional exhaustion and depersonalization. The moderating role of POS in the relation between surface acting and job strain and emotional exhaustion was respectively significant ($\beta = -.28$, $p = .009$; $\beta = -.22$, $p = .032$) whereas the interaction was not significant for depersonalization ($\beta = -.08$, $p = .431$). This study showed that, when surface acting was high, workers perceiving high support from their organization experienced lower job strain and emotional exhaustion.

Conclusion: These results support the importance of considering the role of support from the organization for employees experiencing high emotional demands. Promoting organizational support is important in this context to reduce negative health outcomes. Results should be taken carefully as the nature of physicists and nurses' work is very different. It would be interesting to replicate this study separately for nurses and physicists, which would require larger samples.

An Attempt to Distinguish Burnout from Depression Based on Major Life Stress, Job-Related Stress, and Social Support at Work

Renzo Bianchi¹, Irvin Sam Schonfeld²

¹University of Franche-Comté, Besançon, France, ²The City College of the City University of New York, New York, NY, USA

Introduction: The distinction between burnout and depression notably relies on the idea that burnout is job-related whereas depression is context-free. Despite its popularity, this idea is not beyond question and requires further testing. The objective of the present study was twofold. First, we sought to determine whether major life stress (MLS), a context-free variable, was more strongly related to depression than to burnout. Second, we examined whether job-related stress (JRS) and social support at work (SSW) were more strongly related to burnout than to depression.

Method: The present study involved 277 Northern American teachers. The Shirom-Melamed Burnout Measure was used to assess burnout. The 9-item depression-dedicated module of the Patient Health Questionnaire was used to assess depression. MLS was assessed with a 7-item scale. Teachers had to indicate whether or not they had experienced a series of personal life events in the past 12 months (e.g. death of a close family member or friend). JRS was assessed with a 6-item, 5-point scale centered on teaching-related stressors (e.g. threatening behaviors from students). Finally, SSW was assessed with a 4-item, 4-point scale dealing with support from both fellow teachers and school administrators or supervisors. A multiple regression analysis was carried out with MLS, JRS, and SSW as predictors and burnout and depression as criterion variables.

Results: JRS predicted both burnout ($\beta = 0.21$; 95% CI: 0.11 and 0.32) and depression ($\beta = 0.25$; 95% CI: 0.14 and 0.36), $ps < .001$. Likewise, SSW was found to predict burnout ($\beta = -0.35$; 95% CI: -0.45 and -0.24) and depression ($\beta = -0.30$; 95% CI: -0.41 and -0.19), $ps < .001$. Lastly, MLS was a significant predictor of burnout ($\beta = 0.13$; 95% CI: 0.02 and 0.24), $p < .05$,

and a marginally significant predictor of depression ($\beta = 0.09$; 95% CI: -0.01 and 0.20), $p < .10$. The tested model accounted for about 20% of the variance in burnout and 18% of the variance in depression.

Conclusion: Burnout and depression appeared to be similarly predicted by MLS, JRS, and SSW. The job-related predictors (JRS and SSW) did not preferentially predict burnout and the context-free predictor (MLS) did not preferentially predict depression. The present study questions the pertinence of a domain-based distinction between burnout and depression.

Leader Behaviour Predicting Employee Health and Job Outcomes: The Mediating Roles of Workplace Stressors

Lori Francis, Stephanie Gilbert, E. Kevin Kelloway, Natasha Scott
Saint Mary's University, Halifax, Nova Scotia, Canada

Evidence that leadership behaviour affects employee well-being is accumulating (Kelloway & Barling, 2010; Skakon, Nielson, Borg & Guzman, 2010). Attention is now directed toward the various mechanisms by which leadership quality influences employee health and recent evidence suggests that leadership exerts its influence on followers' health indirectly via its influence on other workplace variables, such as quality of work and the work environment (e.g., Arnold, Turner, Barling, Kelloway & McKee, 2007; Nielson, Randell, Yarker, & Brenner, 2008). We examined how various leadership behaviour (transformational, passive, and abusive) simultaneously influenced follower well-being, with a particular focus on the mediating effects of workplace stressors.

Including role ambiguity as an exemplar of a hindrance stressor and skill use as an exemplar of a challenge stressor, we hypothesized that transformational leadership would increase follower well-being, including physical and psychological symptoms, through its positive effect on skill use and negative effect on role ambiguity. Alternatively, we hypothesized that passive and abusive leadership would realize negative effects on follower health via positive effects on role ambiguity and negative effects of skill use. We further considered how follower health status further influenced two additional variables, intent to seek a new job and absenteeism.

We tested the hypothesized model using AMOS with cross-sectional data from 331 teachers employed by a large school district in Canada. The observed variable model was tested using AMOS. Teachers assessed the leadership behaviours (transformational, passive and abusive) of the administrators at their school and self-reported their own skill use, role ambiguity, psychological strain, physical health symptoms, intentions to leave their school for a different teaching job, and absenteeism. Our hypothesized model was largely supported with a model that provided a good fit (CFI = .95; RMSEA = .06).

Allowing the three types of leadership behaviours to correlate, we found that transformational leadership positively predicted skill use, but did not predict role ambiguity. Passive leadership and abusive leadership each positively predicted role ambiguity, but not skill use. Role ambiguity, skill use, and abusive leadership each directly predicted psychological strain, which in turn predicted job moves and physical health. Finally, physical health predicted absenteeism. We discuss the results in terms of their potential contribution to this research area. We also reflect on practical applications, particularly for teachers and school administrators.

An Experimental Investigation of the Effort-Reward Imbalance Model with Measures Of Salivary Alpha Amylase And Continuously Recorded Heart Rate Variability

Bradley Wright, Kathleen Landolt, Emma O'Donnell
La Trobe University, Bundoora, VIC, Australia

Introduction: The effort-reward imbalance model (ERI) posits that an imbalance between work efforts and rewards can place employees 'at risk' of stress-related illness. Large scale naturalistic prospective investigations have confirmed this premise with depression and

coronary heart disease outcomes. As the ERI has not been tested in an experimental study where rewards are manipulated and physiological and self-report outcomes are monitored, our aim was to study the associations between objective and subjective measures of stress and ill-health.

Method: Female participants (N= 60) were recruited and completed questionnaires that assessed life stress, neuroticism, optimism and perceptions of task effort and reward. Participants provided saliva samples to assess alpha amylase (sAA) at baseline and after the Standard (S) (12 min.) and Reward (R) (12 min.) conditions where participants were required to alphabetise a jumbled list of 40 published journal references and scores were collated based on accuracy (task efficacy). Participants received A\$5 for completing 80% of the S task and in the R task were paid A\$5 for attempting, and an additional A\$5 for completing 80% of the task correctly. Heart rate was monitored continuously using a Polar® chest strap and paired heart monitor and software. Heart rate (HR) and heart rate variability indices (RR, RMSSD & Pnn50) means were recorded for the duration of each of the tasks.

Results: The manipulation of reward was marginally significant in reducing perceptions of ERI ($p < .08$) while sAA, HR and RMSSD scores were reduced ($p < .05$) and task performance improved ($p < .06$). Five hierarchical regressions were used to assess if effort and reward difference scores (Step 3) were related with each of the 5 physiological indices after controlling for confounders (Step 1: Age, hours awake) and other variables (Step 2: neuroticism, optimism, life stress, task efficacy) with RMSSD producing the only significant Step 3 model $R^2 = .11$, $F(2, 51) = 3.29$, $p = .045$.

Discussion: Our findings largely indicate significant associations between objective, but not subjective reports of stress when examining the ERI model. While preliminary, the findings underline the importance of assessing both physiological and self-reported evidence when examining the links between stress and ill-health.

Who Procrastinates More: University Students or White-Collar Workers?: A Study of Active and Passive Procrastination and Achievement Goal Orientation

Richard Hicks, James Storey

¹Bond University, Robina, Queensland, Australia, ²Bond University, Robina, Queensland, Australia

'Putting things off' (delaying things until very late) is not an uncommon experience. Procrastination has been studied extensively with most studies suggesting that procrastination – defined mainly in terms of failure of self-control or self-regulation- has negative outcomes with poorer quality output and associated personal consequences (e.g. increased depression). But are all forms of delay, of procrastination, negative and are all outcomes also negative? Some recent studies have suggested that procrastination can be seen as 'active' (and positive) or 'passive' (traditional, negative).

We decided to investigate university students and white collar workers in relation to their self-reported procrastination behaviours. Motivation was thought also to be implicated and in particular achievement goal orientation (AGO). The AGO model suggests that there are four orientations that can be adopted: mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance. While several studies have examined AGO among university students, little work has been done with employees using AGO or a similar concept applied to their work goals.

We thus also examined the questions: How would university students and separately employees approach the achievement of their goals? And would university students and white-collar workers differ in their achievement goal orientations (self-regulation) and in their active and passive procrastination?

An online survey completed by 126 university students and 59 white collar employees assessed procrastination (general or traditional, active, and passive), achievement goal orientation, and other variables. University students scored significantly more highly on general procrastination, and white-collar workers on active procrastination. Achievement goal orientations were related significantly but differently to active and passive procrastination, indicating the importance of this self-regulatory motivational trait and appearing to confirm that procrastination or delay can be dual-faceted. We may, however, need some further definitional work before the constructs of active and passive procrastination are clear. Who procrastinates more? Our study suggests it depends on the definition and on individuals' achievement goal orientation.

Personality and well-being in Russian and Australian university students

Liudmila Dementiy¹, Richard Hicks²

¹*Omsk F.J. Dostoyevsky State University, Omsk, Russia,* ²*Bond University, Robina, Queensland, Australia*

Personality characteristics have been correlated with occupational suitability and success, work satisfaction, stress in the workplace and general health and well-being. University students are preparing for the workplace and chosen occupations and many of the stresses they face in their "work-life as students" mirror the demands and deadlines of the professions. The personality characteristics linking the students and their emotional well-being (e.g., as assessed through depression anxiety and stress scales) are likely to be precursors to similar relationships between the same individuals as professionals and their own workplace well-being. Several studies have been completed in Australia using the Apollo Profile and the relationships with assessments of stress, well-being and coping.

This current paper presents findings on the responses to the Apollo Profile among Russian and Australian university students. The Apollo Profile is essentially an online international personality, values and preference questionnaire but used in hardcopy for the current research study in Australia and after translation, in Russia. The similarity of patterning of the Russian and Australian samples across the 34 scales and sub-scales of the Apollo Profile is reported, as are comparisons of the correlates of the personality patterns with measures of health and well-being using the Depression, Anxiety and Stress Scales (DASS), measures of resilience and optimism, and a general demographics questionnaire.

The study examines the Australian-Russian similarities and differences in the personality- well-being correlations and personality profiles of the university students. We are also preparing for further studies with employees in Russia, using the same or similar questionnaires, with a view to identifying also student-employee similarities and differences.

Longitudinal Predictors of Burnout - A Systematic Review

Wendy Nilssen^{1,2}, Anni Skipstein¹, Ole Melkevik¹, Eva Demerouti³

¹*Norwegian Institute of Public Health, Oslo, Norway,* ²*Norwegian Knowledge Centre, Oslo, Norway,* ³*Technische Universiteit Eindhoven, Eindhoven, The Netherlands*

Background: Burnout has gained increased interest the last decade. Burnout has been linked to ill health behaviour, ill somatic and mental health, and long-term sickness absence. In addition, burnout has been associated with poor subjective and objective job performance (e.g. turnover, low effectiveness and decreased job satisfaction), and might also have a spill-over effect from the work to home arena. By identifying longitudinal predictors and causal mechanisms behind the development of burnout, one might be able to further develop intervention and prevention efforts to be able to prevent or reduce burnout and hopefully the associated negative consequences for both the individual and society at large.

Aim: The overall aim of the current systematic review is to examine the longitudinal predictors of burnout with these two aims: 1) Systematically map studies examining longitudinal predictors of burnout with regards to mental health, work and family related factors, and 2) Systematically review and conduct a meta-analysis of existing findings.

Method: A systematic literature search was conducted in September 2013, with the electronic databases Medline, PsycINFO, and Embase using medical subject heading terms and key words. The search was not limited to years or language. Grey literature was identified in PsychInfo as well as in a separate search in Google. Two review authors independently screened the abstracts by titles and abstracts. Full text articles were retrieved for inclusion/exclusion. Papers were included when: 1) The aim of the article was to measure predictors of burnout; 2) Burnout was measured by already established standardized validated scales; 3) The study design was quantitative prospective studies. All populations were included. Quality assessment of the included studies will be conducted. If possible, a meta-analysis will be conducted.

Results: The search has revealed 2,682 titles after removing duplicates. Final findings will be presented at the conference as the review currently is in progress.

Employees' Work and Family Interaction and its Relationship to Subjectively Perceived Well-Being

Loreta Gustainiene, Laura Tamosaityte
Vytautas Magnus University, Kaunas, Lithuania

The aim of the research was to determine the relationship between employees' socio-demographic factors, positive and negative interaction of work and family roles and subjectively perceived personal well-being (psychological well-being and subjective well-being). The research participants were 141 employees of various organizations in Lithuania, 45 of them were males and 96 females, aged 20 to 62. The following scales were used in the research: interaction of work and family roles was measured by the Survey Work-Home Interaction scale (SWING, Geurts et. al., 2005), psychological well-being was measured by a Psychological well-being scale (Ryff, 1989), subjective well-being was measured by the Satisfaction with Life scale (Diener et.al., 1985), and Positive Affect and Negative Affect Schedule (PANAS) developed by Watson, Clark and Tellegen (1988).

The results of the research showed that women experienced higher family-work conflict than men. The level of subjective well-being was different in age groups, it was determined that younger employees were more satisfied with life than older ones. Psychological well-being of employees varied by gender and age: males and younger employees showed higher ratings of psychological well-being in comparison to females and older employees.

The research revealed that interaction between work and family roles was closely related to subjectively perceived well-being: higher level of work and family conflict was related to greater negative affect, lower satisfaction with life and lower ratings of psychological well-being. Higher level of positive interaction between work and family was related to greater positive affect, lower negative affect, higher satisfaction with life and higher ratings of psychological well-being.

Highlights Regarding the Provision of Psychological Services in the Field of Law Enforcement

Darius Mihai Turc, Mirela Turc
Ministry of Internal Affairs, Bucharest, Romania

Changes have constantly occurred in the design, organization and work management in the field of safety and public order. These changes can lead to new categories of risks, which might induce higher levels of stress and, thereafter, a serious deterioration of personnel's physical and mental health.

In this context, the primary objective of this paper is to highlight the place and role of the psychologist (and psychology) in the institutions in charge of safety and public order. Issues addressed concern the legal framework governing the psychologist profession in Romania and the internal rules that regulate the activity of the psychologists in the Ministry of Internal Affairs. We also emphasize the specific of psychological activities, referring to the main types of psychological services provided, organizational structure and arrangements necessary for practicing.

Finally, the paper brings attention to the importance of psychological activities' standardization in law enforcement institutions, in order to facilitate the exchange of information between experts, but also to achieve interoperability between different psychology structures in Romania and similar ones of other partners from the EU.

Patterns of Psychosocial Working Conditions as Predictors of Public Sector Manager's Sustainability: A Two Year Follow Up

Linda Corin¹, Erik Berntson², Annika Härenstam¹

¹*Department of Sociology and Work Science, University of Gothenburg, Gothenburg, Sweden,*

²*Department of Psychology, Stockholm University, Stockholm, Sweden*

The purpose of this presentation is to demonstrate that by applying the Job Demand-Resources (JD-R) framework using cluster analysis and logistic regression, one important challenge that has been identified as central in the future JD-R research, can be met, i.e. helping organizations to identify potentially hazardous patterns or profiles of psychosocial working conditions. Such profiles are crucial for targeting groups of employees with specific needs, and thus facilitate interventions and prevention strategies relevant to particular profiles of psychosocial working conditions in contemporary working life. Although the body of research in line with the JD-R model is extensive, variable-centered approaches as well as cross-sectional studies are dominating. Thus, the aim of this study is to validate the JD-R model by using a person-centered approach and longitudinal data. Specifically, the study examines whether different patterns of psychosocial working conditions i.e. job demands and job resources are predictors of public sector manager's sustainability in terms of health, turnover intentions and actual turnover.

The study uses a manager sensitive instrument developed from numerous qualitative studies in the Swedish public sector. In a baseline study (N=548, Response rate 72.5 %), eight clusters with different patterns of psychosocial working conditions were identified by means of cluster analysis. In the present study, these eight clusters were followed up by a questionnaire two years after baseline (N=491, Response rate 66.5 %) resulting in a longitudinal response rate of 56.7 % (N=311). Logistic regression analyses were used to establish whether any of the eight clusters were associated with the outcomes of interest.

In line with the JD-R model, the clusters of psychosocial working conditions display a clear association with health and turnover intentions and to some extent even actual turnover. The results support the hypothesis that different patterns of psychosocial working conditions influence the sustainability of managers. Hence, the JD-R model is a framework that can be used in order for organizations to promote managerial health as well as improving organizational outcomes in terms of turnover and can thus be considered a valuable complement to traditional risk-identification strategies.

The Work Positive Profile: A New Web-Based Psychosocial Audit Tool for the Republic of Ireland

Robert Kerr¹, Patricia Murray², Suzanne Boyd¹

¹*University of Ulster, Newtownabbey, UK,* ²*Health and Safety Authority, Dublin, Ireland*

Background: The Work Positive Profile (WPP) is the official survey instrument that accompanies Ireland's national policy initiative to control work-related stress, Work Positive (WP). Designed to help organizations assess their performance in following the WP process,

the WPP incorporates the (newly validated) Irish version of the Management Standards Indicator Tool and, in keeping with the positive ethos of WP, the WHO-Five Well-being Index (WHO-5), a measure of positive psychological well-being. This combination of measures to assess both psychosocial hazards and well-being is reflective of best practice for managing 'well-being at work' (WAW) according to the European Agency for Safety and Health at Work (EU-OSHA); use of the WHO-5 as a well-being measure is also recommended by EU-OSHA (2013). Following an extensive validation study of the WPP, a new web-based platform is currently being developed to provide Irish organizations with a free, automated version of the survey instrument.

Method: Built using Drupal, a powerful open-source web development framework, the new platform will provide a free version of the survey instrument for any Irish organization that registers on the website. Previous incarnations of the WPP were built and managed by the authors using the online software tool SurveyGizmo; after working with a wide range of public and private sector organizations in Ireland (collecting approximately 8,000 survey responses) and gaining valuable organizational feedback in the process, the new platform has been developed to make administration of the WPP as simple and straightforward as possible, being a fully automated system from start to finish.

Results: Once registered, organizations will have full control over the survey via a secure, password-protected administration area on the website. Organizations will be able to direct employees online for anonymous completion of the WPP, using a web link unique to the organization. To help employers manage the survey process at all stages, the administration area will contain a wide range of resources, from Frequently Asked Questions (FAQs) through to automated, in-depth management reports analysing the organization's survey results. In addition, a comprehensive survey guide will be available to help organizations administer the WPP as effectively as possible.

Conclusion: The new web-based platform will provide Irish organizations with an easy-to-use methodology for following the Work Positive process and for managing WAW, as recommended by EU-OSHA (2013). The platform is currently in development and will be officially launched in early 2014.

Exploring Factors that are Critical to Building A Resilient Workforce

Dina Themistocleous, Andrew Weyman, David Wainwright
University of Bath, Bath, UK

At a time when Britain's workforce is experiencing unprecedented changes in their everyday working lives there is a need to provide the necessary support for staff to do their job and remain healthy in work instead of focusing on supporting individual failure. This approach is a resilience based approach whereby both risk and protective factors are considered in order to build systemic support for the workforce. To date the concept of resilience, even more so organizational processes that can enhance resilience, have received limited attention in relation to health and wellbeing in work contexts. This study aims to contribute to the limited body of evidence on strategies that can help build a resilient organization and workforce.

A qualitative approach was adopted to understand how employees at Bristol City Council (BCC) made sense of their working lives. In total, 20 participants (10 female, 10 male) took part in one-to-one semi structured interviews. The sample utilised a representative cross sectional slice of the BCC workforce. Thematic analysis was conducted on the data collected from participants.

A holistic perspective on workforce resilience is discussed in this study. Analysis identified social, organizational and environmental factors that challenge or build employee resilience. Detailed insight into a rich array of context-specific factors such as smart working, organizational culture, communication, working in the public eye, norms of interaction, sense of community are discussed in relation to workforce resilience.

The results indicate that the responsibility for employee resilience lies beyond the individual; there is a need to consider broader socio-cultural and socio-technical systems for eliciting resilience in the workplace. Identifying key components of a resilient workforce will enable organizations to develop strategies that are embedded within a resilience framework and will ultimately build the resilience of an organization as a whole

Adapting the Management Standards approach in the Republic of Ireland: Validation of the Irish version of the Management Standards Indicator Tool

Suzanne Boyd¹, Robert Kerr¹, Patricia Murray², Jonathan Houdmont³

¹University of Ulster, Newtownabbey, UK, ²Health and Safety Authority, Dublin, Ireland,

³University of Nottingham, Nottingham, UK

Introduction: Work Positive is the Republic of Ireland's national policy initiative to control work-related stress. Since the advent of the UK Health and Safety Executive's Management Standards (MS) in 2004, a number of government-sponsored studies have been undertaken to assess the potential adaptation of the MS framework within an Irish context. The aim of the current study was to investigate the validity and reliability of the Irish version of the MS Indicator Tool (ROI-MSIT), known in Ireland as the Work Positive Profile. This paper reports the study's findings, examining the factor structure of the ROI-MSIT in comparison with the UK instrument and the recently developed Italian MSIT. The criterion-related validity and reliability of the ROI-MSIT are also discussed.

Method: Between February 2011 and June 2012 we collected data from a wide range of public and private sector organizations that used the ROI-MSIT (N = 4794). In addition to the ROI-MSIT, respondents completed demographic questions and a brief mental health measure, the WHO-Five Well-being Index (WHO-5). Factor analysis was used to determine if the ROI-MSIT maintained the 7-factor structure of the UK instrument. The internal consistency of the ROI-MSIT was also assessed to determine reliability, and its criterion-related validity explored through correlation analysis with the WHO-5.

Results: Exploratory factor analysis revealed that the factor structure of the ROI-MSIT is practically identical to that of the Italian version, consisting of 6 factors; the 'demands', 'control', 'peer support', 'relationships', and 'role' factors are equivalent to the original UK factors. As with the Italian version, a principal factor emerged which combined the 'manager support' and 'change' domains. Both the 6-factor measurement model and the original UK 7-factor model were tested using confirmatory factor analysis; both models provided a good fit, although the latter provided a better fit than the former. A higher order model was also constructed following Edwards et al. (2008); this model provided a satisfactory fit. Reliability analysis of the sub-scales revealed Cronbach's alpha values ranging from .80 to .88. Finally, the ROI-MSIT and WHO-5 were found to be positively correlated ($r=.55$).

Conclusions: Our study demonstrates that the ROI-MSIT is reliable and valid, with a factor structure similar to the original UK instrument and the Italian MSIT. Further psychometric evaluation of the ROI-MSIT is recommended.

Quality of Life and Job Satisfaction: Multicultural Perspective

Maria João Cunha^{1,2}, Joao Paulo Pereira^{1,2}, João Maria Pereira²

¹Instituto Superior da Maia, Maia, Portugal, ²Associação Portuguesa de Psicologia da Saúde Ocupacional, Lisboa, Portugal

In Western society, work is a central aspect in people's lives, and research has emphasized the consequences that it may have on the health, quality of life (QOL) and well-being of the population. The person-work dynamic includes a broad of aspects that affect this relation. Considering the PE-Fit Model (French et al., 1972), the Six Areas of Worklife (Maslach & Leiter, 1997; 2001), the Needs and Spillover Theories (Sirgy et al., 2001; 2002; 2006; 2007),

we proposed that the equilibrium person-work environment will influence the way people perceive their work, feeling it as pleasant when it allows them to fulfil their needs through the existence of suitable organizational resources. On this basis, we proposed a conceptual model in order to verify and predict the relation and effect of the dynamic person-work context on the quality of work life (QWL), job satisfaction and QOL, underlying the present cultural diversity of Portuguese organizations.

With regard to the proposed aim, we obtained cooperation from public and private employees. The sample is composed of Portuguese and foreign workers (N=128). Using the General Population Questionnaire of The Investigation Unit in Health and Occupational Health Psychology, data was collected related to the measures of person-work congruence (workload, control, reward, community, fairness, values), job satisfaction and QOL (physical, psychological, social relationships, environment). Group-specific samples were analysed using descriptive statistics, and to examine the implications, strengths and predictive effect of the proposed model, logistic regressions were used.

Considering the worker's cultural particularities, we verified that this imposes itself as an important variable of the perception of QWL, job satisfaction and QOL. In relation to the efficiency of the adopted conceptual model, its predictive validity, was confirmed, verifying that the elements of the relation work and QOL converge in an inter-dependent relation. Thus, the person-work dynamic predicts QWL ($R^2 = .880$; $p = .000$), the job satisfaction ($R^2 = .403$; $p = .000$) and QOL ($R^2 = .151$ $p = .000$). Differences between the two group samples were observed. The results show that Portuguese workers have lower satisfaction levels in all the components of the model, compared to foreign workers: Congruence Person-Work, in reward ($p = .000$) and workload; QWL; Job Satisfaction and QOL.

The consistent association between QWL with Job Satisfaction and QOL calls for improved investments into better QWL, in particular an appropriate balance between the person and organizational environment. This also underlines the influence of work environment in people's general QOL.

Involvement and Emotional Regulation in Oncology Health Professionals: Construction of an Assessment Tool

Maria João Cunha^{1,2}, João Paulo Pereira^{1,2}, João Maria Pereira²

¹*Instituto Superior da Maia, Maia, Portugal*, ²*Associação Portuguesa de Psicologia da Saúde Ocupacional, Lisboa, Portugal*

Cancer is now the most feared disease of all time. Medical advances have allowed the investigation of new forms of treatment, altering perceptions about the disease and affording greater quality of life, not only the patient but for all who engage in it. The experience of the disease is a life event that requires an adaptation of the patient, family and health professionals.

The authors outlined the main objective to investigate and identify connections between health professionals and families of oncology patients and provide guidelines to help develop intervention strategies helping these professionals deal with this involvement. The objectives are based on the research literature about oncology health professionals, involvement, interpersonal relations and styles of attachment.

In order to accomplish what they proposed in this research, the authors developed a tool for assessing the involvement of health professionals with families of oncology patients. The instrument, called Q-EPSON (Soares & Pereira, 2011) was applied to health care professionals practising oncology in the area of Oporto.

The results, after testing for validity and reliability, showed that professionals were significantly involved with patients' families, perceiving it as a fundamental element of support for the family. Making it essential to diagnose risk situations and plan professional support.

We analysed the correlations between the scale of the study (Q-EPSON) and the adult attachment scale (EVA), concluding that dimensions are identical to assess constructs significantly correlated. The main contribution of this paper is to provide clues about the possibility of evaluating the technical and involvement with their families, as well as to launch the discussion on how we can do.

Engagement and Health in Worklife: The Role of Values and Justice

João Paulo Pereira^{1,2}, Santiago Gascon^{3,2}, Maria João Cunha^{1,2}, João Maria Pereira²

¹*Instituto Superior da Maia, Maia, Portugal*, ²*Associação Portuguesa de Psicologia da Saúde Ocupacional, Lisboa, Portugal*, ³*Universidad de Zaragoza, Zaragoza, Spain*

The relation between work context and employees' engagement and health have been studied, namely the role of six areas of worklife. Also, aware of the relationship between work and both values and justice in individual outcomes, several studies have linked conflict of values and perception of lack of justice with burnout, and engagement has been associated with a positive experience of work and employees health.

Thus, the present study aims to evaluate the effect of worklife experience, moderated by perception of values and justice, in engagement and thus in health of workers.

A transversal study was conducted with Portuguese workers (N=899). 62% of the participants were female and 38% male, mean age 42.7 years of age. Results show that the work environment characterized by experience of control, rewards, community and workload predicts the perception of values and justice ($R^2 = .979$; $p < .001$), that in turns predicts engagement through all the three dimensions: energy ($R^2 = .925$; $p < .001$), efficacy ($R^2 = .836$; $p < .001$) and involvement ($R^2 = .728$; $p < .001$). The predictive validity of the conceptual model was supported, verifying that these elements converge in an inter-dependent relation, and predict employees health ($R^2 = .982$; $p < .001$), explaining 76% of the model's variance.

Congruence of values and justice regarding experience of work has a fundamental role in the levels of energy, efficacy and involvement (engagement) of the employees, and thus have a major effect on employees' health.

Burnout and Job Satisfaction among Portuguese and Brazilian Nurses

Sofia Dias^{1,3}, Mary Sandra Carlotto²

¹*FPCEUP, Porto, Portugal*, ²*PUCRS, Porto Alegre, Brazil*, ³*Hospital Center of Vila Nova de Gaia / Espinho, EP., Vila Nova de Gaia, Portugal*

Burnout is attracting increasing attention from the scientific community through the increasing impact it has on workers of various professions. Nursing has been considered the most stressful-profession among health care workers (Pisanti, Van der Doef, Maes, Lazzari & Bertini, 2011) which may negatively affect the quality of nursing care, increase turnover, absenteeism and reduced productivity (Raiger, 2005). The literature emphasizes the importance of work characteristics and context as predictors of burnout (Maslach, Schaufeli & Leiter, 2001).

The present cross-cultural study aims to identify the influence of job satisfaction on burnout among Portuguese and Brazilian nurses through the application of the MBI-HSS (Maslach & Jackson, 1997) and CSLS 20/23 (Meliá & Peiró, 1989). The sample consisted of 460 nurses working in hospitals (230 Portuguese, 230 Brazilians).

Statistical analyses showed that there are differences between nurses in Brazil and Portugal in which variables explain emotional exhaustion, depersonalization and personal accomplishment. For Portuguese nurses, results obtained for the dimension of emotional exhaustion suggested that the predictor model is characterized by the dimensions of satisfaction with supervision and environment. This regression model explained 17% of the variance of emotional exhaustion. Regarding depersonalization and personal accomplishment, the final models were explained by the dimension of intrinsic satisfaction by almost 8% and 13% of the variance, respectively.

When analysing the Brazilian nurses, emotional exhaustion, depersonalization and personal accomplishment were predicted by the dimensions of intrinsic satisfaction and supervision satisfaction with almost 28%, 11% and 14% of variance explained, respectively. For Portuguese nurses, it seems that supervision satisfaction best explained variability in burnout (14%). On the other hand, for Brazilian nurses, intrinsic satisfaction seemed to be the most important variable explaining burnout (24%). In conclusion, these results suggest that job satisfaction is a significant predictor of burnout and make an important contribution to the area of cultural diversity research in nursing.

Collective Stress

Tanja Kirkegaard

Aalborg University, Aalborg, Denmark

Background: While there has been a vast body of research within a cognitive perspective on stress and how personality features can shape an individual's appraisal and coping, there has been an interesting lack of research in examining the impact of social and cultural factors on the appraisal and coping process. The aim of the study was therefore to examine if there are significant group differences in the appraisal of the work environment, in the choice of coping strategies and in the level of stress. Furthermore the aim was to examine how the collective appraisal and coping processes emerged by examining the organizational culture, social interactions and group dynamics.

Method: A mixed method case study with three questionnaire-based measurements was conducted in two departments of a multinational company. A social network analysis (SNA) was used to identify the specific networks in the departments and through a large scale questionnaire measuring the individual stress levels and work environmental characteristics using COPSOQ, appraisals using PSS and coping strategies using BCI, significant differences between the networks in relation to these parameters were measured. The response rate for the three rounds was 90%. By means of the SNA two groups from each department were chosen for the ethnographic part of the study, where social interactions, cultural characteristics and group dynamics were examined.

Results: The results from the qualitative part of the study suggest that stress experiences and coping strategies have collective qualities and that the appraisal and coping processes are shaped by cultural and social factors. The poster will include results from prospective analyses from the quantitative part of the study.

Construct Validity of the SBI-PD in a Mexican Blue-Collar Workers

Anabel Camacho-Ávila¹, Pedro Gil-Monte², Arturo Juárez-García¹, Leonardo Horacio Noriega-Medina¹

¹*Universidad Autónoma del Estado de Morelos, Cuernavaca/Morelos, Mexico*, ²*Universitat de Valencia, Valencia, Spain*

The Spanish Burnout Inventory (SBI) is an instrument that was developed to overcome the psychometric limitations of other instruments which had been adapted to Spanish. The SBI is based on a theoretical model that incorporates four dimensions: enthusiasm towards the job,

psychological exhaustion, indolence, and guilt (Gil-Monte, 2005). The SBI provides a version that is relevant to employees from any occupation, in which their principal activities are not necessarily related to attending other people (professional disenchantment version). In this version, the subscale of indolence has been replaced by the subscale of disenchantment.

In the absence of studies on the validity of this version, this study was designed to evaluate the construct validity of the SBI in a sample of 502 Mexican blue-collar workers.

The results showed that the scale has acceptable levels of reliability (Cronbach's alpha above .68) and confirmatory analysis revealed an acceptable fit in including the four dimensions as hypothesized with significant factorial loads and the expected directions ($\chi^2=350.59$, $df=161$, $\chi^2/df= 2.1$, GFI=.933, TLI=.924, CFI=.935, RMSEA=.048).

We conclude the SBI-PD has satisfactory psychometric properties in evaluating the construct. We discuss limitations and future perspectives.

The Relationship between Engagement and Burnout: A Comparison between Firefighters and Nurses

Jorge SINVAL^{1,2}, Natália Vara^{2,3}, Cristina Queiros^{1,2}, Alexandra Marques Pinto⁴, Sônia Regina Pasian⁵, João Marôco⁶

¹Psychosocial Rehabilitation Lab, Porto, Portugal, ²Faculty of Psychology and Educational Sciences, University of Porto, Porto, Portugal, ³School of Health Sciences (ESS), Bragança Polytechnic Institute, Bragança, Portugal, ⁴Faculty of Psychology, University of Lisboa, Lisboa, Portugal, ⁵Faculty of Philosophy, Sciences and Literature of Ribeirão Preto, University of São Paulo, Ribeirão Preto - São Paulo, Brazil, ⁶Department of Statistics and Health and Psychology Investigation Unit – ISPA – University Institute of Psychological, Social and Life Sciences, Lisboa, Portugal

Background and Aim: Since Freudenberg (1974) and Maslach (1976) described burnout symptoms, professional activities related with human services are considered as stressful occupations (Cherniss, 1995). Recent literature shows that nurses and firefighters have a stressful professional activity, dealing with emotional demands of their patients/clients, and being vulnerable to burnout (Brough, 2004; Kanai-Pak et al., 2008; Lourel, 2008; Khamisa et al., 2013; Pienar & Bester, 2011; Schaufeli & Buunk, 2003; Thian et al., 2013; Tuckey & Hayward, 2011). However, they are also engaged workers, motivated to help other people, which suggests that burnout and engagement are related concepts (Maslach, 2011; van Beek et al., 2012). We aim to compare burnout and engagement levels among nurses and firefighters, and better understand the relationship between these concepts within these two professional groups.

Method: A sample of 1,852 nurses (81% female, mean age = 35.9 years, 69% with children, 71% married) and 1,809 fire-fighters (77% male, mean age = 32.2 years, 47% with children, 47% single) fulfil during 2009 to 2013 adapted Portuguese versions of Maslach Burnout Inventory General Survey (Maslach & Jackson, 1997) and Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003).

Results: Nurses present moderate levels of burnout (emotional exhaustion=2.4; depersonalization=1.1; personal accomplishment=4.4; using a 0 to 6 points likert scale) and moderate levels for engagement (vigour=4.1; dedication=4.4; absorption=3.8; using a 0 to 6 points likert scale). Regarding firefighters, they present low values for burnout (emotional exhaustion=1.6; depersonalization=1.4; personal accomplishment=4.2) and high levels of engagement (vigour=5.0; dedication=5.2; absorption=4.7). Comparative analysis reveals significant differences for all burnout and engagement dimensions between the two groups. Burnout dimensions are negatively correlated with engagement dimensions, with stronger correlations among firefighters.

Conclusions: Despite nurses and firefighters both dealing with human suffering, their professional activities have a different impact on the emotional state of these workers. Nurses seem to be more affected, with higher burnout and lower engagement than firefighters, with age also playing an important role. More attention should be paid to the emotional state of human services workers due the fact that their work has a strong impact on the quality of the services and care that the broader population receives, and also patient satisfaction (Vahey et al., 2004). Additionally, the results of this study contribute to the discussion about the complex relationship between burnout and engagement and the influence of socio-demographic factors (Cole et al., 2012; Garrosa et al., 2011; Maslach et al., 2001).

Burnout in Police Officers: The Role of Organizational Demands and Job Rewards

Beata Basinska

Gdansk University of Technology, Gdansk, Poland

Background: The Police profession is associated with high job demands and psychosocial hazard. The aim of the study was to examine Job Demands-Resources Model in police officers including two main relationships: the first between demands and exhaustion and the second between resources and disengagement (Bakker and Demerouti, 2007). Job demands refer to different characteristics of work that require effort. Demands can be categorized as organizational demands (e.g. work context) and professional demands (e.g. work content) (Cox et al., 2000). Job resources are important to employees' motivation and can be limited to job rewards (Siegrist, 1996). Burnout syndrome comprises two factors: exhaustion and disengagement (Demerouti et al, 2003). Exhaustion is defined as a consequence of intense physical, affective and cognitive strain. Disengagement refers to distancing oneself from work and negative attitudes towards it.

Methods: 413 police officers (58 women) took part in the study. The following methods were used. Organizational demands were measured by the Effort Scale (ERI-Q by Sigrist et al., 2004) and the Psychosocial Risk Scale (1 item, Dudek et al., 2004). Professional demands were assessed by 3 items (work environment, traumatic events and shift-work). Resources were evaluated by the Rewards Scale (ERI-Q by Siegrist et al., 2004). Burnout was evaluated by means of the Oldenburg Burnout Inventory (Demerouti et al., 2003). Structural equation modelling was used to analyse the data with mediating effects also calculated.

Results: The tested model did not fit the data well ($\chi^2/df = 2.237$, AGFI = .904, PCFI = .788). The relationship between professional demands and exhaustion was non-significant. Further analysis revealed that other variables should also be introduced. The modified model indicated good fit ($\chi^2/df = 1.999$, AGFI = .914, PCFI = .798, RMSEA .049, 90CI = .040-.058). The relation between organizational demands and exhaustion and the relation between rewards and exhaustion, as well as the relation between rewards and disengagement were significant. The direct effect of organizational demands on exhaustion was large (.596, 90BC = .493-.697) and the indirect effect on disengagement was moderate (.345, 90BC = .272-.421). Direct effect of rewards on disengagement was small (.190, 90BC = .044-.265) but stronger than indirect effect via exhaustion (.086, 90BC = .026-.146).

Conclusion: The Job Demands-Resources Model in the police context was partly replicated. Organizational demands can aggravate exhaustion and can lead to disengagement. Insufficient rewards may reduce employees' engagement. The improvement of organizational practices may help to reduce burnout.

Organizational Predictors of Burnout in a Sample of Italian Primary and Secondary School Teachers

Daniela Converso, Sara Viotti, Gloria Guidetti, Rosa Badagliacca

University of Turin, Department of Psychology, Turin, Italy

Background and aim of the study: In recent times, mandatory schooling has been object of organizational changes, mainly due to huge personnel and resources cuts, at the same time

having to face an exponential growth of needs and difficulties due to society transformation in multi-ethnic and multi-cultural perspectives or to scientific evolution. The teachers who work in schools are pointed out as one of the social group most at risk of unease: teaching is a stressful occupation (Salanova et al., 2005; Chaplain, 2008) and is one of the professions with the highest levels of mental health problems (Santelia, 2006). Some studies have suggested that this may be due to the professional isolation, the high levels of emotional labour which teaching entails and taking long-term responsibility for children's lives and the main stressors may include disciplinary problems, low salaries, disagreement with colleagues, or conflict with parents, redefinition of job conditions as a consequence of school reforms. Moreover teachers seem to experience – more than any other category – the dimensions of social disvalue, poor valorization and acknowledgement of their commitment. By comparing different antecedents of working malaise Cordeiro et al. (2002) have noticed that the strain experienced by teachers is indeed to be attributed more to factors linked to context factors than to classroom, even when teaching and children show problematic conditions.

The aim of present study is to identify predictors -within the factors that describe the workplace context- of job burnout in a sample of Italian teachers of primary and secondary school. Method: 18 schools of North-West Italy area were involved in the project. 350 teachers (nprimary school=150; nsecondary school=200) filled a self-report questionnaire in which were included Spanish Burnout Inventory (Gil-Monte, 2005) and School Organizational Questionnaire (Hart et al., 2000). Data were analyzed using SPSS and a series of multiple regression analyses were carried out (stepwise). Results and conclusions: First model ($R^2=.316$) shows as predictors of psychological exhaustion: excessive work demand ($\beta=.401$) and role clarity ($\beta=-.157$). In second model (19.7% of variance explained) enthusiasm toward job was significantly predicted by organizational climate ($\beta=.239$). In the third model ($R^2=.148$) feedback ($\beta=-.157$) shows a significant relationship with Indifference. The last model not identifies ($R^2=.113$) significant predictors for feeling of guilt.

The study highlights the importance of certain organizational characteristics in predicting burnout and suggests considering them in order to calibrate interventions aim at promoting well-being in the educational workplace context.

Evaluation of a Training for Health Oriented Leadership: A longitudinal Analysis

Rebecca Pauly¹, Viktoria Arling², Jessica Lang¹

¹RWTH Aachen University, Institute for Occupational Medicine, Aachen, Germany, ²RWTH Aachen University, Institute of Psychology, Aachen, Germany

Objective: Based on the increasing number of mental strains at the workplace, training for health oriented leadership has become more and more important. This longitudinal work is a summative evaluation of leadership training concerning employee oriented management as well as self-care. The aim was to investigate whether the intervention changed perceived lifestyle, psycho-social and stress-buffering factors as well as strains among the management staff of a medium-sized company in Germany.

Methods: In a sample of 114 participants, evaluation criteria were measured before the training (T1), three months after the training (T2), and at a follow-up after six months (T3). Evaluation criteria (i.e. reactions, learning, and behaviour) were adopted from the Four- Level Model of Evaluation from Kirkpatrick (1994). Effects over time were analyzed with a repeated measurement ANOVA. Cohen's d was used as the effect size estimator. In order to present the training effects at a summary level, evaluation measures were combined into singular and multiple evaluation criteria according to Wittmann, Nübling and Schmidt (2002). Pre-test differences and drop-out analyses were conducted to strengthen the findings.

Results: Comparisons between managers who participated in all three measurements and dropouts after T1 showed that the latter report a higher level of stress-buffering strategies than

participants who remain in the programme. No pre-test differences could be found. Evaluating the learning level, small to medium effect sizes were derived. Longitudinal data showed particularly that participants' perceptions of employee orientated management developed positively over time, as well as their stress-buffering techniques. Furthermore, it was found that effects differed across leadership levels. Singular and multiple outcome-criteria are in line with statistical results which supports the conducted evaluation methods and derived results.

Conclusion: The evaluation indicates that the present management intervention is goal-oriented because it addresses participants who can benefit from such leadership training. Reactions towards the intervention illustrate that the training was highly accepted. Differences in learning effects across different leadership levels indicate that the training is sensitive towards the individual participant. Managers' perceptions of health oriented leadership style towards employees showed the strongest learning effect which corresponds to the primary goal of the intervention. The present training seems to be a valuable intervention to emphasize the leaders' role in supporting employees' well-being through health oriented leadership style. This also implies responsibility in the leader's self-care. Future research needs to follow up on organizational results from the training, to provide additional information on overall effects.

Research Methods for Simulation-Based Training in Air Traffic Management

Celine Mühlethaler, Chiara Knecht

Zurich University of Applied Sciences, School of Engineering, Centre for Aviation, Winterthur, Switzerland

Objective: Numerous studies in high-risk work settings indicate that about 80% of all accident causes in aviation can be attributed to human factors (e.g. Helmreich, 2000; Reason, 1990; Flinn, 2008). Human factors represents non-technical skills, especially cognitive and social skills, which complement workers technical skills (Flinn, 2008). As human errors cannot be eliminated in today's workforce, research point out that an effective training concept is able to help people achieve appropriate non-technical skills to cope with the risks and demands of their work. The purpose of this paper is to introduce preliminary research for training development in order to conduct a new concept for non-technical skills simulation-based training for Air Traffic Controller (ATCO) in Switzerland.

Methods: Information about the realistic work situations of ATCO's and the possible causes for human errors (leading to accidents or conflicts) derived from critical incidents questionnaires and interviews (N = 26) and discussions with safety experts as well as from analysis of airprox accidents of the last 10 years in Switzerland - which were categorized using a qualitative approach with a category system. Additionally F-JAS (Fleishman, 1995) was applied to analyze the subjective importance of human factors in air traffic management (ATM) (N = 17).

Results: In our qualitative (categorizing critical incidents and airprox accidents) and quantitative (correlation and regression analysis) analyses the following human factors were showed to play a significant role in ATM safety, and thus can be regarded as important learning units in the training of non-technical skills: situation awareness, decision-making, communication, teamwork, leadership, stress/workload management and threat/error management. Furthermore, these factors were significantly inter-correlated; e.g., situation awareness with stress/workload management (.47**), situation awareness with decision making (.43*), and communication with leadership (.43*). Furthermore, results from interviews showed that non-technical skills training need to cover more real-work-settings (than in classical CRM-Trainings) and thus should be completed with realistic simulations (radar) to guarantee a better transfer.

Implications and conclusions: Our results (a) highlight the importance of human factors in ATM – the above mentioned human factors have in all analyses been found highly relevant for ATM safety. (b) The inter-correlations of human factors indicates that the training of one factor

needs to be incorporated in the training of another factor (e.g., training of situation awareness in stress episodes (high traffic)) and (c) that ATCO's see great advantages in real-work settings to expand their skills and knowledge in human factors.

Human Factors Training in Air Traffic Management: A New Approach Using Computer-Based Simulation Methods

Chiara Knecht, Céline Mühlethaler

Zurich University of Applied Sciences, School of Engineering, Centre for Aviation, Winterthur, Switzerland

More than 80% of all accident causes in aviation can be attributed to human factors (e.g. Helmreich, 2000; Reason, 1990; Flinn, 2008). The basic human factors in Air Traffic Management consist of the following cognitive and social dimensions: situation awareness, decision-making, communication, teamwork, stress/workload management as well as threat/error management (e.g., Eurocontrol, 1996, Mühlethaler & Knecht, in prep.). As literature illustrates, human errors cannot be eliminated in today's workforce. But research points out that an effective training concept (e.g., in terms of simulation-based training) is able to help people achieve appropriate non-technical skills to cope with the risks and demands of their work (Flinn, 2008).

The aim of the following paper is to demonstrate a new trainings design for non-technical skills training for Air Traffic Controllers in Switzerland. By focusing on simulation-based methods, we simulated a real-life educational setting (simulation of realistic traffic in complex exercises) with different difficulty stages for each human factor. Contrary to classic Crew-Resource-Management training this new approach allows an active learning environment that reinforces transfer processes from training into real work settings. The human factor relevant accident causes incorporated in the radar scenarios were derived from a critical incident procedure via ATM-staff and safety experts, analysis of airprox accidents (of the last ten years) and F-JAS questionnaire ratings from 17 Air Traffic Controllers. In addition to the simulation-training (radar operation simulation), the theoretical background on each human factor, support material for briefings and debriefings as well as instructor training will be provided. With the following simulation-based human factors training Air Navigation Service Providers (ANSP) are able to improve their employee's non-technical skills in a realistic high-risk environment.

Employee Turnover Intention and Leader-Member Exchange: A Multilevel Investigation

Igor Portoghese¹, Maura Galletta¹, Michael P Leiter³, Adalgisa Battistelli²

¹*University of Cagliari, Cagliari, Italy,* ²*Université Bordeaux Segalen, Bordeaux, France,*

³*Acadia University, Wolfville, Canada*

Turnover theorists have suggested that employee' decisions to leave an organization follows progressive steps: starting from a condition of job dissatisfaction, gradually progressing in successive steps that increase the likelihood of leaving the workgroup, the organization and the profession (Sheridan & Abelson 1983). In this regard, the workgroup can be considered as the first (work)place environment where employees develop leaving cognitions (Hayes et al. 2012). The aim of this study is to analyze employee turnover intention from work unit by using a multi-level approach, examining at the individual level, the relationships between job characteristics, job satisfaction and turnover intention, and at the group level the role of leader-member exchange (LMX).

Aggregated data of 935 nurses nested within 74 teams of four public Italian hospitals were collected in 2009 via a self-administered questionnaire. Hierarchical linear modeling showed that job satisfaction mediated the relationship between job characteristics and turnover intention at the individual level. At the unit level, LMX was directly linked to turnover intention. Furthermore, cross-level interaction revealed that LMX moderated the relationship between job characteristics and job satisfaction.

This study supported previous research in single-level turnover studies concerning the key role of job satisfaction, providing evidence that job characteristics are important in creating motivating and satisfying jobs. At the unit-level, LMX offers an approach to understand the role of unit-specific conditions created by leaders on nurses' workplace well-being.

The Effect of Trust and Openness on Safety Performance: The Role of Group Safety Climate

Anna Paolillo^{1,2}, Silvia A. Silva², Margherita Pasini¹

¹University of Verona, Verona, Italy, ²Instituto Universitário de Lisboa (ISCTE-IUL), Lisbon, Portugal

A large part of the literature stresses that the quality of social relationships (such as comfortable communication with a trusting environment) between leaders and employees contributes to employees' safety. Previous work essentially argues that trust promotes safer behavior and reduces accidents in the workplace. In particular Luria (2010) showed that leaders who create a relationship of trust with their subordinates are more likely to create a safe working environment, and to achieve higher and stronger supervisor's safety-climate perceptions among their subordinates in a military context. Literature reveals that co-workers also have a fundamental safety role, but the influence they have on safety climate perceptions and outcomes has not been fully explored. Moving ahead from Luria's (2010) contribution the aim of the present study was to test the role of group safety climate in the relationship between trust and openness in communication and safety performance. Specifically we hypothesized that safety climate at the co-workers' level and at the supervisor's level could mediate the relationship between trust and openness in communication within the organization and safety performance.

Data were collected using a questionnaire. Two subscales from the Integrated Organizational Safety Climate Questionnaire (Brondino et al., 2013) that assess supervisor's safety climate and coworkers' safety climate were used. Safety performance was measured with an adjusted version of the Griffin & Neal scale regarding safety behavior (Griffin & Neal, 2000). Trust and Openness in communication was evaluated using three items from the Communication Climate Scale of Smidts et al. (2001). All the scales revealed very good reliability with alphas varying between .74 and .96.

The sample included 250 blue-collars of four Italian manufacturing companies. Data analyses showed high correlations among the considered variables ($p < .001$) which was a prerequisite for testing subsequent mediation effects. The mediation was tested following Baron & Kenny's (1986) recommendations. Results reveal that trust and openness effects decrease and/or become non-significant when the mediators were introduced. Namely, both supervisor's safety climate ($R^2 = .20$, $\beta = .33$, $p < .001$) and co-workers' safety climate ($R^2 = .28$, $\beta = .46$, $p < .001$) have a mediation role between trust/openness in communication and safety performance. These effects were confirmed using a Sobel test. The mediation will also be tested using other approaches (e.g. SEM) and these results will be also presented. Theoretical and practical implications will be discussed.

Change and Stability in Subjective Well-Being over the Transition from Higher Education to Employment

Petra Lindfors¹, Daniel Hultell², Ann Rudman², J. Petter Gustavsson²

¹Stockholm University, Stockholm, Sweden, ²Karolinska Institutet, Stockholm, Sweden

The transition from higher education (HE) to employment is an anticipated life event experienced by many adults. This transition involves further socialization into work but is typically paralleled by other life changes as well. While the negative effects of such transitions have been investigated, little is known about changes in subjective well-being (SWB). This study set out to investigate SWB trajectories in terms of affective well-being (AWB) and cognitive well-being (SWB) over the transition from HE to employment. Data came from a seven-year nationwide longitudinal cohort study where student nurses ($N = 1,702$) were

assessed annually. Longitudinal analyses showed a positive effect, particularly on AWB, of leaving higher education and starting work. Yet the effects decreased over time, suggesting that individuals over time adapt to this anticipated life event and that other factors, including challenges at work, influence long-term SWB. Consistent with previous findings, demographic factors had little impact, which may partly relate to the relative homogeneity of the student cohort. In showing that an anticipated life event such as the transition from HE to employment is paralleled by differential AWB and CWB trajectories, this study furthers the understanding of individual development as related to SWB during adulthood.

Reducing Work Related Stress: A Randomized Controlled Trial (RCT)

David Glasscock¹, Ligaya Dalgaard¹, Ole Carstensen²

¹*Dept. of Occupational Medicine, Herning, Denmark,* ²*Dept. Of Occupational Medicine, Esbjerg, Denmark*

Background: Many RCT's aimed at reducing work related stress are plagued by methodological limitations. Few studies employ samples of clinically referred employees. Study populations are often poorly defined. There is a lack of interventions combining elements directed both at the individual and the workplace. This study tests an intervention aimed at sick-listed patients referred to the Dept. of Occupational Medicine, Herning, because of work related stress.

Methods: Patients referred from general practice were examined via clinical interview. Cases were identified as those meeting criteria for severe stress and adjustment disorder. Informed consent was gained from patients meeting criteria for inclusion/exclusion. Baseline questionnaires (perceived stress PSS-10, mental health GHQ-30, sleeping problems BNSQ, cognitive difficulties CFQ) were completed and repeated after 4 and 10 months. Information on sick leave was also gathered. Participants were randomly assigned to treatment or control group.

Intervention consisted of:

1. Six individual, cognitive behavioural sessions with psychologist over 4 months.
2. A meeting between patient, immediate supervisor, and the psychologist, aimed at guiding the workplace regarding stressful conditions and return to work.

Results: There were no baseline differences between groups in age, gender, education or outcome measures. After 10 months both groups reported less perceived stress, fewer symptoms, improved sleep and cognitive functioning. There was a significant treatment effect after 4 months: The treatment group exhibited lower PSS-scores and better mental health (GHQ) compared with controls. There was no effect on self-reported sick leave.

Discussion: The intervention promoted faster recovery than was seen in a control group. Faster improvement did not translate into shorter sick leave. It is likely that return to work is a complex process involving not only stress at the individual level, but also organizational and social factors not measured in the current study.

Mediating Functioning of Experienced Difficulties in Concentration for Relationships of Work Stressors to Aspects of Health

Grit Tanner¹, Eva Bamberg¹, Maren Kersten², Agnessa Kozak³, Albert Nienhaus^{2,3}

¹*University of Hamburg, Hamburg, Germany,* ²*Institution for Statutory Accident Insurance and Prevention in the Health and Welfare Services, Hamburg, Germany,* ³*University Medical Center Hamburg-Eppendorf, Hamburg, Germany*

Whereas attention is focused on perception, concentration is defined as one aspect of working, responsible for selection and coordination of information (Berg & Westhoff, 2006). Concentration is needed for the controlled execution of actions. Next to internal factors, the

current level of a person's concentration is determined by external conditions (Westhoff & Hagemester, 2005, e.g. working conditions). Focusing on working conditions, empirical studies have shown work stressors, such as work overload and time pressure, to be related to a reduced work situation awareness (Sneddon, Mearns, & Flin, 2013) and also to cognitive failures at the workplace (Elfering, Grebner, & Haller, 2012). Moreover, these studies have indicated that these concentration related aspects may mediate the relationship with unsafe behaviour (Sneddon et al., 2013) and risky commuting (Elfering et al., 2012). Certainly, there is rarely research on concentration mediating the relationships between work stressors and impairments to health, even though difficulties in concentration are associated with impairments to health (a symptom of depression; American Psychiatric Association, 2001). On this background, this study aims to examine the mediating functioning of experienced difficulties in concentration for relationships of hospital physicians' work stressors to aspects of health.

Data were collected through online surveys in several German hospitals. Work stressors specific to hospital physicians were measured with the short version of ISAK (Instrument for Stress-related Job Analysis for Hospital Physicians; Keller, Bamberg, Kersten, & Nienhaus, 2013). For measuring experienced difficulties in concentration specific items of the German questionnaire KiA (Concentration in daily life; Scholz, 2006) were used. The selected items were validated in a pre-test. Additionally, aspects of health were measured. Mediating effects were examined with structural equation modeling.

Support was found for the notion that experienced difficulties in concentration (EDC) acted as a mediator in some relationships. Concerning task-related stressors, the analysis suggested EDC mediated the relationships of uncertainty and frustration about how work needs to be done to several aspects of health. For interaction-based stressors EDC only mediated the relationships of social stressors with patients and families. Contrary to expectations EDC did not appear to mediate relationships regarding time pressure.

The study proved experienced difficulties in concentration as mediator in several relationships between work stressors and aspects of health on a sample of hospital physicians. Future research should investigate the mediating functioning of experienced difficulties in concentration on samples of other occupations. The results provide approaches for the prevention of long-term impairments to health. For proving causality the findings should be examined in a longitudinal study.

Person-Centered Approach vs. Variable-Centered Approach in Determining Relationship between Organizational Commitment and Work-Family Conflict

Giedre Geneviciute-Janoniene¹, Aukse Endriulaitiene²

¹*Department of Theoretical Psychology, Vytautas Magnus University, Kaunas, Lithuania,*

²*Department of General Psychology, Vytautas Magnus University, Kaunas, Lithuania*

For more than a decade researchers have explored organizational commitment and tried to determine its influence on work behaviour based using a person-centered approach instead of variable-centered approach (Meyer & Hercovitch, 2001; Meyer et al., 2012). Most studies investigating relations between commitment and work-family conflict apply a variable-centered approach and emphasize negative relationships between these two variables (Casper et al., 2011; Namasivayam & Zhao, 2007). As organizational commitment is a comprehensive psychological state characterized by different levels on all components (affective, normative and continuance) of commitment, the usage of profiles of different components of commitment may assist in determining the relationships between commitment and work - family conflict. Therefore, the purpose of this study was to compare person-centered and variable-centered approaches investigating relationships between organizational commitment and work-family conflict.

A cross-sectional survey was employed to gather data from 1,098 employees (747 women and 361 men) from different organizations in Lithuania using the Organizational commitment questionnaire (Meyer, Allen, 2004) and Work-family conflict scale (Carlson et al., 2000). Correlational analysis showed that all three components of commitment were negatively related to different forms of work-family conflict on various levels. K-means clustering analysis was used to identify four commitment profiles (fully committed, affective-dominant, continuance-dominant and uncommitted). Multivariate analysis of covariance (MANOVA) revealed statistically significant differences between four clusters (profiles) of commitment with regard to work-family conflict. Fully committed employees experience less work family conflicts compared to other groups while uncommitted employees as well as employees with continuance-dominant profiles experienced much more work-family conflict. Moreover, employees with affective-dominant profiles experience more work-family conflicts than fully committed employees. The conclusion has been made that a person-centered approach allows more accurate and specific relationships to be established between organizational commitment and work-family conflict.

Linking Patient Health Behaviours to Patients' Perceptions of the Fairness of their Health Care Providers

Camilla Holmvall, Lori Francis, E. Kevin Kelloway, Peter Twohig
Saint Mary's University, Halifax, NS, Canada

With concerns evident regarding the sustainability of the Canadian Health Care System (e.g., Conference Board of Canada, 2013), it is important to try to understand factors that might help to alleviate burdens on, and increase the efficiency of, health care. Such factors might include the health promotion activities of patients (e.g., taking responsibility for one's health by means of reporting unusual symptoms and seeking information on healthy behaviours; Lee & Loke, 2005) as well as treatment adherence. In the current research, we apply a concept traditionally studied in the organizational domain, namely organizational justice, to understanding patient health behaviours.

Organizational justice research focuses on four facets (Colquitt, 2001). Distributive justice refers to the fairness of the outcomes one receives; procedural justice refers to the fairness of the procedures used to allocate outcomes or make decisions; informational justice refers to the adequacy and timeliness of information sharing; and interpersonal justice refers to the extent to which one is treated with dignity and respect by decision-making authorities. Past research in the justice domain supports the idea that perceptions of fairness promote positive relationships with, and trust in, decision-making authorities and adherence with decisions and policies (e.g., Cohen-Charash & Spector, 2001). Thus, we expected that greater perceptions of fairness of one's primary health care provider (i.e., distributive, procedural, interpersonal and informational justice; Colquitt, 2001) would be associated with greater health promotion activities and treatment adherence.

We used a cross-sectional survey design ($N = 236$) with patients across district health authorities in Nova Scotia. We used a modified version of Colquitt's (2001) scale to assess procedural, interpersonal, and informational justice, and wrote distributive justice items that tapped the principle of need (Deutsch, 1975). We measured health responsibility with a subset of items from Lee and Loke (2005) and wrote items to measure treatment adherence and advice following. Results suggest that perceptions of fairness concerning the interpersonal treatment, procedures and outcomes provided by primary health care providers are related to patient health responsibility as well as treatment and advice adherence. These results suggest that building and maintaining positive relationships between patients and health care providers via fairness might be important for the long-term sustainability of the health care system. Limitations and future research directions will be discussed.

The Customer as Psychosocial Work Environment, a Person-Centred Methodological Approach

Erik Lundkvist, Ingrid Schele

Umeå University, Umeå, Sweden

Methods in traditional occupational psychology research often entail variable-centred statistical analyses or thematically focused analyses of interview data. In recent years person centred approaches have been introduced for research, suitable for statistical and interpretative approaches. This project looking at work related health among retail salespersons, aims to adopt a person-centred analytical approach on both interview and Likert-scale data. Narrative analysis is a person-centred interpretative method. The more common thematic analysis certainly gives the reader an idea about the interview texts. However, since thematic analyses generally do not focus on the individuals' perspective there is a risk that both the individual differences and depth of personal experiences that can be construed from interview data is left out. In statistical analyses, variable-centred methods have similar shortcomings as the analyses focus on the relations between variables rather than individuals.

A person-centred statistical approach provides the possibility to study clusters of individuals with similar scores of the variables of interest. In traditional analyses the relations between variables may lack ecological validity as the variances between individuals are not shown, and extreme variations are often excluded as outliers. As the results of variable-centred statistical analyses are hard to interpret from an intrapersonal perspective, implementation of results in organizations may be problematic – what needs to be done under specific circumstances remains unknown.

The overall aim of applying the person oriented approach in this project will be to explore retail salespersons perceptions of good and bad customer meetings, how these meetings affect them over short and long time and what they expect from future customer meetings. Two person-centred studies are planned. First, we will analyse cognitive interviews (N=25) with a person-centred narrative approach and create narrative profiles that describe how individuals perceive the customer meeting. Further, we will use a person-centred approach on our survey data (N=600). The person-centred approach of latent profile analysis will give us the opportunity to generate different profiles in the salespersons perceptions of the customer meeting and relate it to their health, stress, demands, resources, and well-being. We believe that using person-centred methods will create better opportunities for organizations to implement knowledge into the workplace to improve work related health issues for employees, relative to variable-centred or thematic oriented methods.

Parallel Processes underlying Work-to-Family Conflict and Facilitation

Lois Tetrick, Qikun Niu, Clifford Haimann

George Mason Univ., Fairfax, VA, USA

It has long been recognized that the link between work and family is bi-directional; work affects one's family life and one's family life affects work. However, the literature has not examined in detail the processes that lead to work influencing family and vice versa.

The purpose of this study was to examine the viability of a parallel process model using the job demands – resources framework. Specifically, we hypothesized, consistent with the JD-R model, that job demands, job resources (perceived organizational support) and personal resources (core self-evaluations) lead to work-to-family conflict and to work-to-family facilitation; plus, in a parallel fashion, family demands, family resources (perceived family support) and personal resources (core self-evaluations) lead to family-to-work conflict and family-to-work facilitation. It was noted that personal resources affect both domains. In addition, we hypothesized a reciprocal relation between work-to-family conflict and family-to-work conflict as well as work-to-family facilitation and family-to-work facilitation. In other words,

conflict in one domain mutually and simultaneously leads to conflict in other domain and facilitation in one domain mutually and simultaneously leads to facilitation in other domain as resources are depleted and or restored, suggesting a more permeable boundary between work and family that has been examined previously.

In an exploratory sense we examined the relations between work to family conflict and family to work facilitation and work to family facilitation and family to work conflict. Preliminary data from a sample of 138 individuals supports the notion of our hypothesized parallel processing model. There was also support for the reciprocal relations between work-to-family conflict and family-to-work conflict as well as work-to-family facilitation and family-to-work facilitation.

We are now embarking on additional data collection from working couples to extend our model to incorporate cross-over effects. It is expected that this project will enhance our understanding of the work-family interface.

I “Want” or I “Ought” to Work: A Motivational Analysis of the Role of Persistent Fatigue and Autonomy Support on Nurses’ Sick Leave Absenteeism and Perceived Quality of Work

Stéphanie Austin, Claude Fernet

Université du Québec à Trois-Rivières, Trois-Rivières, Canada

In most health care settings, nurse must work 12-hour day or night shifts, regularly combined with unplanned overtime and breaks that are insufficient for resting and recuperating between scheduled work (Geiger-Brown & Trinkoff, 2010). As nurses are responsible of early detection of patient complications and problems, the fatigue experience daily can potentially affect their capacity to initiate proper actions of care and minimize negative patient outcomes (Rogers, 2008). A potential explanation for this result is that, while nurses value their job, they may not possess sufficient energy and psychological resources to do the job they “want” to do and slowly begin to think about their work as something that “ought” to be done. Results from a recent motivational study among nurses at career start support this hypothesis (Austin et al., 2013). Specifically, the results show that persistent fatigue undermines nurses’ quality of work motivation over a year’s time: the more nurses feel fatigued, the more they engaged in their job to avoid negative emotions (i.e., guilt, shame, anxieties), to gain feelings of self-worth (i.e. self-esteem), or to acquire rewards that are either social (i.e., condition regard) or tangible in nature (i.e. career advancement, monetary incentives). Such controlled motivation is longitudinally related to sickness absenteeism. In contrast, the more nurses are autonomously motivated, meaning that they engage in their job because they value their tasks or because they derive satisfaction and pleasure from them, the less they intent to quit their job and to be absent over time. Although interesting, these results underline the need for further research to help health care facilities and their human resources personnel tackle persistent fatigue and its’ after-effects on lost productivity. The self-determination theory (SDT; Deci & Ryan, 2000) proposes that the social environment plays a critical role in people’s development by either supporting or diminishing their autonomous motivation. Based on SDT, this study aims to examine if the quality of support at work (perception of autonomous support from superiors) fosters good quality of work motivation (i.e. increased autonomous motivation, decreased controlled motivation) as well as productivity associated with absenteeism (being absent from work) and work quality (perception of doing the best quality of work in the job).

Method: Data were collected from 630 novice nurses at two time points (T1 and T2), 12 months apart. Results: Structural equation modelling (SEM) confirmed the model validity. Controlling for T1 fatigue, T1 perception of autonomy support had a positive effect on T2 autonomous motivation. Controlling for T1 fatigue and taking into account autoregressive effects of each variable, T1 controlled motivation had a positive effect on T2 absenteeism, whereas T1 autonomous motivation had a negative effect on T2 absenteeism and a positive effect on T2 perception of quality of work.

Conclusion: The findings encourage the use of supportive communication and positive feedback, as well as the provision of rationale and choice when managing nurses as such autonomy supportive practices—fatigue aside—appear to foster high quality of work motivation and productivity over time.

The Association between Work-Related Rumination and Physical Illness Symptoms

Leif W Rydstedt¹, Mark Cropley²

¹Lillehammer University College, Lillehammer, Norway, ²University of Surrey, Guildford, UK

Work-related rumination, that is, failing to mentally unwind, and ruminating about work issues when not at work, has been associated with a range of health variables, including fatigue, disturbed sleep and saliva cortisol. This study examined the association between three different ways of thinking about work post work (affective rumination, problem solving pondering, and detachment) and physical illness symptoms. Affective rumination is negatively valenced thinking about work issues where individuals become tense and annoyed because they cannot stop thinking about work; problem-solving pondering is associated with thinking about work-related problems but in a more detached unemotional way, and detachment is not thinking about work outside work hours.

Three hundred and thirty-seven white-collar workers (male = 42.2%; Female = 57.8%) completed a survey containing measures of work-related rumination (affective, problem-solving pondering, and detachment (Cropley et al., 2012), and physical illness symptoms (Pennebaker, 1982).

For all three rumination types, high ruminators reported experiencing a higher frequency of physical illness symptoms, relative to low affective ruminators ($P < .01$). However, workers reporting high levels of work-related rumination reported more physical illness symptoms (e.g., sore throat, colds, heartburn, dizzy spells etc.), compared to problem-solving ponderers and low detachers. In addition, when the three types of ruminative thinking were entered into a regression analysis controlling for demographic and work hours, only affective rumination made a significant contribution to physical illness symptom reporting.

In conclusion: thinking and ruminating about work outside of working hours appears to be associated with poor immune functioning and an increased risk for experiencing physical illness symptoms. Moreover, it appears that affectively/emotionally ruminating about work is the main contributor to increased physical illness symptoms. These findings are based on cross-sectional data, and longitudinal studies are needed to support the present results, and future research could examine biological markers of immune functioning in order to support the present findings.

Perceived Stress and Biomarkers in Medical Residents

Ambar Deschamps Perdomo¹, Maria Teresa del Campo Balsa¹, Kelman Luis de la Rosa Zabala², Ignacio Mahillo¹

¹Hospital Universitario Fundacion Jimenez Diaz, Madrid, Spain, ²Hospital Universitario de Mostoles, Madrid, Spain

Introduction: Work stress has been described in different occupational settings, including the emergency medical dispatch center. Occupational stress is a major risk in medical professionals. There is evidence that job stress is related to stress biomarkers including elevated adrenal axis and sympathetic-adrenergic-pituitary-adrenal. The early detection of physiological changes in workers' initial stress phase may be a strategy to prevent fatigue or wear and consequently health disorders related to exposure to prolonged stress.

Aim: To study the relationship between perceived stresses, as measured by a validated questionnaire and different stress biomarkers in resident physicians who perform emergency shifts in a hospital.

Material and Methods: this is a descriptive study, cross-sectional over the period 2012-2013. Involving 48 resident physicians who perform emergency shifts in a third level hospital. Recruitment was carried out through a call for periodic medical examinations to resident physicians (of 2nd to 5th year) during the period 2012-2013. These included the Perceived Stress Scale (PSS- 10) and the Goldberg validated test for anxiety/depression (actual and previous). Other variables of the study were demographic, occupational and biomarkers: cortisol, leukocytes, lymphocytes, glucose, cholesterol, LDL-cholesterol, HDL-cholesterol, triglycerides and thyroid hormones. The venopuncture for serum biomarkers were taken in the outgoing guard, Monday through Friday before 10 am.

Results: Most of the residents studied had perceived stress as identified by the PSS (89.58%). Differences were observed between subjects with PSS positive vs. PSS negative in the type of their service; this was mostly between medical and surgical shifts. Linear regression revealed an association between PSS and type of service and actual anxiety, as measured by Goldberg.

Conclusions: The shifts increase the burden of perceived stress. However, this cannot always be detected through the evidence of biomarkers.

When and How Management-Related Problems Predict Burnout in SME Owner-Managers: The Role of Loneliness, Self-Esteem, and Entrepreneurial Orientation

Claude Fernet¹, Olivier Torres², Stéphanie Austin¹, Josée St-Pierre¹

¹Université du Québec à Trois-Rivières, Québec, Canada, ²Université Montpellier 1, Montpellier, France

Although research indicates that entrepreneurs are vulnerable to occupational stress (Akande, 1994, Boyd & Gumpert, 1983, 1984, Shepherd, Marchisio, Morrish, Deacon & Miles, 2010; Wincent & Orqvist, 2009), only a few empirical studies have focused on burnout among small-to-medium enterprise (SME) owner-managers. Burnout is an affective reaction due to prolonged exposure to job stress that can be characterized by a state of physical, emotional and mental exhaustion (Pines & Aronson, 1988). Whereas past studies on entrepreneurial burnout, and existing literature, provide insights into the determinants of burnout, some theoretical and empirical gaps remain in our understanding of the psychological mechanisms involved and the complexity of the pathways by which these mechanisms impact burnout in SME owner-managers. To narrow this gap, this study explores the relational roots of entrepreneurial burnout. Drawing from the literature on interpersonal relationships (Baumeister & Leary, 1995), which suggests that a sense of connectedness is essential to psychological functioning and well-being, we propose loneliness as a relevant psychological mechanism to explain how management-related problems contribute to burnout. To broaden this understanding, we examine whether individual (self-esteem) and organizational factors (entrepreneurial orientation) strengthen or mitigate the relationship between loneliness and burnout.

This multi-wave study was conducted among owner-managers in France. A total of 377 participants completed a short questionnaire administered by telephone (response rate = 75%). Participants were mostly men (82.8%), and their mean age was 44.6 years ($SD = 7.71$). Average experience as owner-manager was 11.36 years ($SD = 8.14$). Management-related problems (financial, sale, administrative and problems with employees and suppliers) were assessed using five items developed by Torres and Lechat (2011). Feeling of loneliness was assessed with a single item. Self-esteem was measured with the Rosenberg (1965) self-esteem scale. Entrepreneurial orientation was assessed using the scale developed by Covin and Slevin (1989) measuring the extent to which a business is proactive, innovative and risk-taking. The Burnout Measure Short version (Malach-Pines, 2005) was used to assess burnout.

Results revealed that management-related problems, self-esteem, and feeling of loneliness were related to burnout. The relationship between management-related problems and burnout was mediated by the interactions of loneliness and self-esteem as well as loneliness and entrepreneurial orientation. Our findings suggest that owner-managers who reported lower on self-esteem and entrepreneurial orientation reacted more negatively to loneliness (and were more vulnerable to burnout) than those who reported higher on self-esteem and entrepreneurial orientation. Implications for research, theory, and practice will be discussed.

The RED Methodology: A Tool for Testing Psychological Risks.

Isabel M. Martinez, Marisa Salanova, Susana Llorens
Jaume I University, Castellón, Spain

The WONT research team is located in the Jaume I University (Spain). This team specializes in testing psychosocial health in the workplace and in the provision of advanced services for the diagnosis, assessment and intervention of psychosocial risks in the workplace. Recently the team has designed and implemented the RED (Resources-Experiences-Demands) methodology that offers an innovative aspect that not only assesses the traditional negative aspects in order to minimize risks and psychological damages as has been done traditionally, but also takes into account the positive aspects, that influences workers in order to reinforce strengths and wellbeing at work. This dual perspective is also used to give feedback to organizations about aspects which can be improved.

The purpose of this study is to show the characteristics and applications of this methodology for assessing psychosocial factors in the workplace, especially the RED questionnaire. The main aim of the RED questionnaire is the identification of: 1) psychosocial risk factors, or stressors, at specific levels (i.e., company, work group, area, department), 2) potential at-risk groups (i.e., older workers, temporary workers, low qualified workers, supervisors) and 3) people likely to develop stress-related problems (i.e., technostress, burnout, workaholism, mobbing), and 4) healthy and positive organizations, groups and individuals (engaged, flow). It is a practical, systematic, comprehensive, modular, flexible, scientific questionnaire, that is, well adapted to national laws. It is a practical tool based on empirical research which has been adapted to national laws on the assessment and prevention of occupational hazards. The scales cover a wide range of stressors (psychosocial dangers) and consequences (individual, group and organizational damage) as well as resources and positive results. The RED questionnaire matrix is 'modular' and is made up of 37 scales. The scales included in the questionnaire are based on theoretical models of scientific impact in the field of occupational health psychology. This questionnaire is available in an electronic version (via the Internet or Intranet) in Spanish and English language.

We show the psychometric properties of the scales, the validation results and main findings of studies with heterogeneous samples of more than 4,000 workers from public and private sectors. The scales show acceptable psychometric properties: EFA & CFA, Internal consistency tests (Cronbach's) and validation.

Physical Health of University Students in Austria: Gender and Age Differences

Elisabeth Noehammer, Kathrin Wiesner

UMIT - University of Health Sciences, Medical Informatics and Technology, Hall in Tyrol, Austria

Objective: Higher education is highly correlated with a higher socio-economic status and better health (Deaton, 2003). However, little is known about health issues during the process of acquiring that education. Moreover, several studies report that the Bologna process has negative health effects (Keller et al., 2008). Although university students form a substantial percentage of the population and are crucial (future) members of the workforce, promoting

their health has not been of central interest in theory or practice. A study on student health was thus conducted regarding physical, psychological, social and monetary issues using the example of Austria. The focus of this paper is on physical health, gender and age differences.

Methods: A quantitative online questionnaire was developed based on literature and existing validated questionnaires on health. This was announced to all universities in Austria and made available to those who agreed to participate. In total, the dataset resulted in over 15,000 cases. Physical health status and health complaints, substance abuse, dietary, and exercise habits were analyzed using frequency analysis, correlations, factor analyses, regression analyses, and various non-parametric tests.

Results: Nearly 92% of the questioned students are satisfied with their health status. The more physically active the students are, the better they categorize their status of health. For the majority, substance abuse is no issue. Exercise habits are more problematic, most respondents do not seem to engage in sports enough. Age and gender do have an influence in both health related attitudes and health status. Interestingly, 18-20-year-old students show the best health status and health-related behaviors except for eating habits. Male students smoke more often and consume more alcohol than female students.

Implications: Especially older student groups and male students should be encouraged and assisted in developing a healthier lifestyle. To ensure that health risks and health potentials of students are analysed on a regular basis and the resulting needs are met, a yearly (non-mandatory) check of student health on campus resulting in a health report on the specific needs is suggested. That way, targeted interventions can be designed and evaluated plus future health related problems of a large part of the population prevented

Academic Resilience Scale: A Construct Validity Approach in Spanish University Students.

Isabel M. Martínez, Isabella Meneghel, Marisa Salanova
Jaume I University, Castellón, Spain

Universities are important organizations in today's society. As productive organizations or businesses, universities require an understanding of the psychosocial factors affecting its members (teachers, students, etc.). The study of stress and its consequences in students, professors and general staff, is essential for obtaining good performance and profitability of universities. But there are many methodologies for the study of psychosocial factors in educational organizations.

In a general sense, resilience has been defined as the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances (Howard & Johnson, 2000). Similarly, academically resilient students are those "who sustain high levels of achievement motivation and performance despite the presence of stressful events and conditions that place them at risk of doing poorly in school and ultimately dropping out of school" (Alva, 1991, p.19).

The aim of this study is to translate and validate the Academic Resilience Scale (Martin & Marsh, 2006) to the Spanish university context. The sample is composed by 300 university students (57.1% female), from different faculties: experimental sciences, health sciences, laws sciences, and social sciences. The scale contains 6 items (Likert response). Statistical analyses (EFA & CFA) show a single factor structure (similar to the original scale). Internal consistency tests (Cronbach's) are acceptable.

The results illustrate significant differences in academic resilience values among men and women, men are more resilient. But the factor structure is invariant across gender. Relative to Martin and Marsh (2006), in the case of Spanish students, we also identified similar predictors

of resilience. Data show that self-efficacy and engagement are good predictors of resilience. Also, there are significant relationships between resilience and academic satisfaction, as well as between resilience and perceived performance.

Practical and theoretical implications are discussed and highlight the importance of considering the results for universities staff (rectors, deans, professors, etc.) and students.

The Work Design Questionnaire: Validation of a French and Dutch Version

Bart Van de Ven, Bert Weijters

Ghent University, Ghent, Belgium

The Work Design Questionnaire (WDQ) is a questionnaire for the analysis of work characteristics. The WDQ consists of 21 subscales, assessing constructs related to task, knowledge, social, and contextual work characteristics. It is a general measure of work characteristics that is used by scholars and practitioners to conduct basic research on the nature of work or to design and redesign jobs in organizations. In their *Journal of Applied Psychology* paper, Morgeson and Humphrey (2006) demonstrated the excellent reliability and convergent and discriminant validity of the WDQ. Ever since, the WDQ and its subscales have been used in numerous studies. Stegmann et al. (2010) developed and validated a German version of the WDQ. The present study aims to present and validate a French and Dutch version of this widely used questionnaire.

Translation-back-translation procedures were used to develop these versions. Data were collected in Belgium ($n = 1190$). The French speaking subsample consisted of 432 employees with a mean age of 45.7 ($SD = 10.8$). 93.7 % were male and 52.6 % lower educated (secondary school level). The Dutch speaking subsample consisted of 758 employees. The mean age was 43.64 ($SD = 11.1$), 92.6 % were male and 58.3% lower educated.

Preliminary results indicate good reliability and validity for the WDQ scales. Full results will be presented at the time of the conference. Translations of questionnaires hold the risk of losing some of the original features in terms of reliability and validity. Validations of translations are therefore needed in order to make sure that questionnaires, such as the WDQ can be used across the globe. Practical implications and limitations, such as the overrepresentation of men in both subsamples, will be discussed.

A Multilevel Approach to the Study of Customer Interaction and Stress and Well-Being

Esther Hauer

Department of psychology, Umeå, Sweden

Customer interaction is a substantial part of a salesperson's workday; making it an important part of their psychosocial work environment. Still, how retail salespeople perceive customer interaction and how the available resources make it possible to reach satisfactory sales and emotional states has not received much research attention. There is also a lack of research considering the relationship between customer interaction and employee mood, stress, health and well-being. Thus, we aim to quantitatively examine the relationships between perceived customer interaction and the resources and demands present in those interactions. The outcomes of such interactions, in terms of perceived stress, health, and well-being, will also be investigated.

A survey, which will allow data on a diverse range of variables to be collected, will be distributed to a representative sample of retail salespersons ($N=600$) from at least 10 workplaces in order to facilitate multilevel analysis. This study is part of a larger research project and the psychometric instrument used will be partly developed from cognitive interviews exploring the desired relations. The extent to which participants can relate their own experiences to the typified narratives will be examined. Besides background information about

the salesperson and their current workplace, the survey covers: 1) perceptions of positive and negative customer interactions, their regularity and how they influence emotions and expectations of future customer interactions; 2) resources in customer interactions, such as the focus of the business management (oriented toward customers or employees), first line managers leadership style, social support from manager and colleagues, own competence, current use of competence, possibilities to develop competence and own engagement; 3) quantitative demands, such as closures/sales and demands on adjustment of emotions and behavior; 4) work stress; 5) general health and wellbeing, such as self-rated health and sleep.

Survey data will be analyzed with multilevel structural equation modeling (MSEM). Data with a nested structure (individuals in their contexts) can then be analyzed, making it possible to investigate in which level the phenomena occur. We also intend to explore, with latent profile analysis, the survey data and the typified narratives together.

This study will offer deeper knowledge about the importance of customer interactions for retail salespeople's psychosocial work environment and its effects on emotions, expectations, stress, health and wellbeing, as well as knowledge about which resources in the psychosocial work environment that buffer against negative customer interactions and/or contribute in making the perception of customer interaction positive.

Social Health of University Students in Austria: Gender and Age Differences

Elisabeth Noehammer, Astrid Linortner-Rabel

UMIT - University of Health Sciences, Medical Informatics and Technology, Hall in Tyrol, Austria

Objective: Higher education is highly correlated with a higher socio-economic status and better health. However, little is known about health issues during the process of acquiring that education, which is a quite challenging period in life. Moreover, several studies report that the Bologna process has negative health effects (Keller et al., 2008). Although university students form a substantial percentage of the population and are crucial (future) members of the workforce, promoting their health has not been of central interest in theory or practice. A study was done to explore this topic regarding physical, psychological, social and monetary issues using the example of Austria. The focus of this paper is on social health.

Methods: A quantitative online questionnaire was developed based on literature and existing validated questionnaires on health. This was announced to all universities in Austria and made available to those who agreed to participate. In total, the dataset resulted in over 15,000 cases. Social health variables were analyzed using frequency analysis, correlations, factor analyses, regression analyses, and various non-parametric tests.

Results: The variables used for this study resulted in four components of social health: social integration, social isolation, social primary social network aspects and contacts at the place of study. Female students show better values for all positive social aspects. Older students report worse social networks. Students between 31 and 35 feel best integrated and least isolated, the age group 36-40 reports the best contacts. Combined with variables of the SF 36, we found that the higher students feel socially integrated, and the better their social contacts at the place of study are, the less they feel affected by emotional problems. The higher respondents scale on social isolation, the more they feel affected by emotional and physical problems.

Implications: Female students report better social networks, integration and inclusion. Interestingly, age seems to be an asset – especially students between 31 and 35 or older show better values on the scales. For younger students, this may be due to stressful introductory phases, or settling in a new place, for the older ones due to working part time. Thus, orientation and mentoring programs for younger and targeted assistance programs for older students would be helpful.

Effect of Work Overload and Burnout (Chronic Stress) on the Quality of Work Life

Juana Patlan-Perez

UNAM-Mexico, Ciudad de México, Mexico

Introduction: Burnout syndrome occurs frequently in people who have to spend considerable amount of time in intense relationship with people as clients or users of a service provided by the organization (Maslach & Jackson, 1981). These situations cause chronic stress on workers which results in fatigue and emotional stress for the worker. Burnout is a syndrome in which the worker has experiences emotional exhaustion, depersonalization and reduced personal accomplishment (Maslach & Jackson, 1981). On the other hand, the quality of work life (QWL) is related to all aspects of work that may be relevant to the satisfaction, motivation and work performance. As pointed out by Casas, Repullo, Lorenzo and Cañas (2002), the QWL is a multidimensional concept and is a dynamic and continuous process in which work activity is organized objectively and subjectively in order to contribute the fullest development of the human being. The construct of QWL tries to reconcile aspects of work related to the worker's experience and organizational objectives belonging to two groups: a) aspects of the environment where work is performed and b) aspects of the psychological experience of the workers. The QWL is important for its impact on the health and welfare of workers and the identification of the factors that positively or negatively affect this variable are transcendent to the quality of life of workers.

Objective: The aim of this study was to determine the effect of burnout and work overload on QWL on personnel at a health institute in Mexico.

Method: Cross-sectional and descriptive research was conducted with a stratified sample of 673 workers. Four scales were used to measure work overload, burnout, and two dimensions of QWL: work-family conflict (WFC) and job satisfaction. For hypothesis testing, structural equation modeling was performed with AMOS software.

Results: The results indicate a positive and significant effect of work overload on burnout and WFC, and a negative effect on job satisfaction. Furthermore, burnout is associated positively with WFC and negatively with job satisfaction. The overhead is significantly associated with two QWL factors: job satisfaction and CTF. These results indicate that a high level of exhaustion and depersonalization produce low levels of job satisfaction, necessarily impacting on the work-family relationship as a result of the multiple demands and work and family responsibilities that the employee has to attend to.

The Relationship Between Work Stressors and Work Wellness of Managers in a Large Mining House

Monica Smith^{1,2}, Nicolene Barkhuizen³

¹Exxaro, Gauteng, South Africa, ²University of Pretoria, Gauteng, South Africa, ³University of the North West, North West, South Africa

Introduction: In the last few years there has been a significant increase in the amount of managers suffering from burnout. Due to the high levels of burnout more and more managers are leaving their high stress industries for less stressful environments, due to ill-health caused by stress and burnout. From most of the research done on work stressors it has generally been determined that there are two sets of variables that define any specific job: job demands and job resources. Job demands (JD) are defined as the degree to which the environment contains stimuli that peremptorily require attention and a response. Job resources (JR) are described as the physical, psychological, social or organizational aspects of the job that can reduce the demands of a job and can help to functionally achieve success in the job. Research has shown that burnout is a result of JD and the lack of JR. Work Engagement (WE) has been defined as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption. Engagement is seen as a persistent and pervasive affective

cognitive state that is not focused on any one particular object, event, individual or behaviour. This is seen as a positive effect when individuals are happy in their jobs and are most productive.

Method: A quantitative research approach was followed with surveys distributed to a convenience sample (N=141). A Job Characteristics Scale, the Maslach Burnout Inventory (MBI-GS), The General Health Survey and the Utrecht Work Engagement Scale (UWES) were administered.

Results: Results suggest that there is a significant relationship between JD and burnout ($p=0.002$). Therefore JD is a strong predictor ($t=3.209$) of burnout. As the t value is a positive value it can be determined that JD has a positive effect on Burnout.

The results gained from the analysis support that there is a significant relationship between JR and WE ($p>0.001$). It can be stated that JR is a great contributor to the predictor, WE, as $t = 8.456$. As the t value is a positive value it can be determined that JR and WE have a positive relationship, when JR increase, WE will increase as well.

Health and Safety Practitioners' Role Definition and Psychosocial Challenges of the Job

Sara Leitao, Birgit Greiner

University College Cork, Cork, Ireland

Health and safety practitioners (HSP), as frontline professionals advocating for the health and safety conditions at work, suffer from diverse pressures and demands themselves that have an impact on their health and wellbeing. Previous research, whilst scarce, suggests that the main issue is the lack of a defined role and/or influence or autonomy of these professionals in their company. At national level the role of the HSP is only vaguely defined in different countries and lacks details on the responsibilities, tasks and level of authority of these practitioners. With the current fast paced changes in the work environment and in the economic circumstances, the HSP's role has been expanded to accommodate the new needs of workers and organizations.

This study aims to identify and classify the main tasks of HSP, determine their level of influence and autonomy in the company as well as ascertain what psychosocial and organizational factors affect these professionals the most. Building on previous research the current study hypothesises that the lack of a structured role can result in unclear and high demands, role ambiguity and lack of control of the HSPs (with pressures from management and hostility from workers). These aspects affect the wellbeing and health of the HSPs, their work efficiency and thus, the overall health and safety performance of an organization.

A web survey was distributed to 9,000 HSP, members of the Institution of Occupational Safety and Health in Ireland and UK. Data collection is still ongoing and will gather information on the type and frequency of tasks, and main psychosocial work characteristics faced by HSP (through the Job Content Questionnaire). The current analyses will focus on the grouping and classification of tasks according to Brun and Loiselle's model defining specific dimensions (i.e. Technical, Human or Organizational) for the HSP activities. This will provide a structured and scientific approach to the definition of the role of the HSP, allowing to observe which type of tasks are more prominent in this job and understanding what level of influence and autonomy these professionals hold.

These findings will bring an important insight into this unexplored role and may inform the formulation of models of good practice as well as tailored training and continuous development education for these individuals. The results will also allow understanding the main psychosocial pressures affecting these professionals which may then also affect further stakeholders within the HSP's organizations.

Learning to Survive: The Role of Learning Resources to Develop Team Resilience and Improve Performance

Israel Sánchez-Cardona, Marisa Salanova Soria

WoNT Research Team, Universitat Jaume I, Castellón, Spain

Based on the HERO model (Healthy and Resilient Organization), which proposes an interrelation between healthy organizational practices, healthy employees and healthy organizational outcomes, our aim in this study is to analyze the effect of career and abilities development practices and team learning on team resilience and performance. Resilience in organizational setting is commonly defined as the ability to preserve or improve functioning from untoward events. Authors suggest that teams oriented to acquiring new skills, mastering new situations and improving competences can adapt easily to adverse conditions and perform better. Team learning is considered as a process throughout which team members seek to acquire, share, refine, or combine relevant knowledge, and can help to develop resilience and perform better. Moreover, learning opportunities derived from organizational practices are often related to good organizational outcomes. For example, career and abilities development practices provide employees and teams with a new and diverse set of resources and competences which are important to successfully confront and adapt to common and exceptional situations.

Considering that these learning opportunities can serve as important resources to promote teams' resilience and performance we hypothesize that: 1) organizational learning practices (career and abilities development practices) are positively related to team resilience, 2) team learning positively relates to team resilience, and 3) team resilience mediates the relationship between learning practices and performance.

Analysis of multilevel modeling with a sample of 713 employees nested in 169 teams from 52 organizations in Spain showed that: 1) organizational learning practices relate positively to team resilience ($\beta = .36, p < .01$); 2) team learning positively relates to team resilience ($\beta = .31, p < .01$); 3) team resilience fully mediates the relationship between organizational learning practices and team performance, but partially mediates the relationship between team learning and performance. The model accounted for 16% of the variance of team performance.

These results suggest the relevance of investing in learning opportunities either at the organizational level (learning opportunities) or at the team level (team learning), which helps to continuously develop resilience that can help teams confront turbulent situations and perform even better during and after difficult times.

The Symptoms of Burnout Syndrome and the Role of Dysfunctional Attitudes among Hungarian Health Care Professionals

Zsuzsanna Kerekes¹, Tunde Edes¹, Nora Kopasz¹, Laszlo Mangel¹, Monika Tiszberger¹, Caleb Leduc^{2,3}, Michel Lariviere^{2,3}

¹University of Pecs, Pecs, Hungary, ²Laurentian University, Sudbury, Ontario, Canada,

³Centre for Research in Occupational Safety and Health, Sudbury, Ontario, Canada

The aim of this study is to measure the stages of physical, mental and emotional distress symptoms in burnout syndrome in the case of different medical professionals (doctors, nurses and assistants at different wards). Previous literature has demonstrated that members of medical teams show a high level of burnout symptomatology, and suffer from several, mostly undiagnosed, and untreated mental issues and psychosomatic symptoms caused by work and home demands (Girgis, 2009; Holmqvist, 2006; Mohrena, 2003; Pines, 2005; Hegedűs, 2008). Results of different studies show that dysfunctional patterns of thinking have a negative influence on experiencing stress and burnout (Kerekes, 2007; Pálfi, 2003). These dysfunctional attitudes could be the key elements to change the locus of control and the feeling of helplessness in the distress caused by burnout.

Method: Self-report questionnaires were administered to 94 medical professionals in two oncology departments (n=63), in a G.E. practice (n=13), and in a maternity ward (n=18). Measures included the standardized version of BOQ (Burnout Questionnaire, Freudenberger, 1980); BOS (Individual Burnout Symptomatic Questionnaire, Appelbaum, 1980); and the DAS (Dysfunctional Attitude Scale, Weissmann, Beck, 1979; Burns, 1980) yielding data according to job satisfaction and socio-demographics.

Results: There were no significant differences between the departments across burnout indicators. In case of the different medical attendance professionals, the average numbers reached levels where attention and intervention is needed. According to DAS data, the oncology department with a higher range of medical attendance statistically ($p < 0.05$) shows a significant difference from other departments. Maternity ward employees relative to the G.E. employees present notably different results on both the DAS Autonomy and Entitlement subscales. With respect to the DAS subscales, both qualification and the number of children are influential factors. Marital status has a significant effect on the approval subscale, with divorcees demonstrating higher levels of dysfunctional thinking than married and single participants. Sex, age, and the tenure were not significant factors.

Conclusion: Prevention and intervention based on the results of DAS subscales may have a significant effect on the therapy of burnout syndrome. Changing dysfunctional attitudes highlights the importance of understanding and emotional support (approval) from the family; changing the external locus of control (autonomy) and the presence of a supporting, fair attitude from the working environment (entitlement subscale).

Disturbing the Existing Power Structure: Adding the Clinical Nurse Leader Role to the Nursing Hierarchy

Lisle Hites, Jessica Wakelee

University of Alabama at Birmingham, Birmingham, Alabama, USA

The Institute of Medicine published the landmark report titled *To Err is Human: Building a Safer Health System* revealing the inefficiencies of the United States healthcare system. Although the healthcare system excels in its capacity to treat serious illness, medical errors, fragmentation, and inequity are prevalent and often place patients at risk unnecessarily. Though significant improvements in patient safety and quality have been accomplished over the past 10 years, much remains to be done. Toward the goal of improving health care quality and safety, the microsystem assessment framework was developed for use on the “front line” of care (microsystem) rather than from the traditional “top down” approach. As healthcare quality, safety, and cost outcomes are produced from activities that occur within the microsystem, improvement in the larger health care system (macrosystem) is dependent upon achieving optimal microsystem performance. The Clinical Nurse Leader (CNL) role was developed in response to concerns about the quality and safety of nursing care in the complex, technologically advanced, ever-changing healthcare system. The CNL role is a Master’s degree program, targeting experienced and credentialed nurses who are interested in furthering their education and responsibilities. However, this new role has been met with a mixed reception from nursing supervisors, co-workers, and even subordinates, resulting in passive aggression and workplace hostility directed toward CNLs.

To better understand the situation of CNLs, investigators piloted an online survey to better understand the roles, responsibilities, and perceptions of CNLs in the workforce. Further, this survey captured qualitative information to better characterize any incidences of workplace aggression and bullying. Participants consisted of CNL students, key management personnel, nursing faculty, and community leaders. The survey targets the value of the CNL credential and the CNL program as a model for addressing current and future quality and safety improvement within the healthcare system. 58 surveys were initiated and 39 surveys were completed. In addition to online surveys, a focus group was conducted with members of a CNL Advisory Committee.

Results support concerns that CNLs are subjected to workplace aggression, passive aggression, and other forms of bullying which is perceived to be directly related to their role as CNL. Further anecdotal evidence suggests that this aggression may be related to the newness of the CNL profession, in that the CNL role is not only unclear (low in role clarity) but also disrupts an existing power structure and hierarchy among nurses in the workplace.

A Preliminary Study Investigating the Relationship Between Work Engagement, Job Satisfaction, Emotional Dissonance, and Wellbeing in High Potential Employees

Alia Al Serkal

du (Emirates Integrated Telecommunication Company), Dubai, United Arab Emirates

The aim of the study was to examine engagement and wellbeing with high potential employees. The participants (N= 60) worked in a telecommunication organization based in the Middle East, and were part of a talent pool. This group consisted of managers and middle managers. They were administered a questionnaire consisting of measures on emotional dissonance (ED) (FEWS), employee engagement (UWES), decision making (DM), job satisfaction (JS), physical symptoms (PS), and GHQ. The results of this study will be used as a baseline for an ongoing longitudinal study.

The average age of the participants was 35 years, with 90% male, and 73% came from collectivistic cultures. Fifty eight percent of the participants worked in the organization for 4-5 years. Preliminary results indicate participants reported quite a lot of DM ($x= 3.98$, $Std= 1.00$), and were very often engaged at work ($x= 4.94$, $Std= 0.59$). This group also reported moderate amounts of JS ($x= 5.04$, $Std= 1.04$), and rarely experienced ED ($x= 2.36$, $Std= 0.95$). No significant difference was observed between the variables. Through regression analysis, a relationship was found with JS and low GHQ. It was observed that there was a relationship with ED and PS. There was a positive relationship between engagement and JS, more specifically intrinsic JS.

At present, the main limitation is the small sample size, even though there was 100% participation rate. It is expected that as the talent pool group grows, participants will also increase. A practical implication of this research is to understand whether high potential employees who have high engagement, experience psychological symptoms over time. At present, there is limited research in this area, especially when examining the effect of high engagement on employees in the long term.

Easing the Pain of Overload at Work: Resources, Higher Status, and the Enhanced Buffering Hypothesis

Jonathan Koltai, Scott Schieman

University of Toronto, Toronto, Canada

There is strong evidence that job pressure—also referred to as “overwork”—has undesirable consequences on a range of personal and social outcomes, including health and well-being. In this paper, we ask: What protects workers from the harmful effects of job pressure or overwork? One thesis underscores the ways that job-related resources attenuate the impact of job pressure. In the job demands-control model (JD-C) and the more recent job demand-resources model (JD-R), this is labelled the “buffering hypothesis.” The first objective of our study is to directly test the buffering hypothesis by situating one prominent workplace demand (job pressure) alongside three coveted job-related resources (schedule control, job autonomy, and challenging work). We analyze a large representative sample of the American workforce—the 2008 National Study of the Changing Workforce (NSCW)—to assess the efficacy of these buffering resources for two outcomes: anxiety and job dissatisfaction.

Three main contributions emerged from this research. First, we differentiate the ways that three job-related resources— job autonomy, schedule control, and challenging work—

moderate the impact of job pressure. In tests of two-way interaction terms, we observe their buffering efficacy in attenuating the positive association between job pressure and job dissatisfaction; however, as we will describe below, these two-way effects were not observed when anxiety was our focal outcome. Second, we differentiate the ways that education and income (but not occupation) represent additional contingencies that elaborate on the two-way buffering effects. Here, the patterns diverge somewhat depending on both the outcome (job dissatisfaction or anxiety) and the SES moderator (education or income). Third, while our observations provide modest—albeit conditional—support for the buffering hypothesis, we find no evidence to support the enhanced buffering hypothesis. We discuss how these findings advance theoretical articulations of the interrelationships among demands and resources—and their consequences for well-being.

Development and Initial Validation of a New Model of Work Recognition

Ofelia Tatu¹, Anna Maria Berardi², Marcel Lourel³

¹VTE, Lyon, France, ²Université de Metz, Metz, France, ³Université d'Artois, Arras, France

Research highlights the importance and the role of work recognition for wellbeing and mental health (Bourcier & Palobart, 1997 ; Brun, Biron, Martel & Ivers, 2003 ; Morin, 2008 ; Molinier, 2010), identity construction (Dejours, 1993 ; Pierre & Jouvenot, 2010 ; Guéguen & Malochet, 2012), motivation, and work satisfaction (Siegrist, 1996 ; Bourcier & Palobart, 1997; Sauderson, 2004 ; Brun & Dugas, 2005 ; Pierre et Jouvenot, 2010). Still, as most of the research is qualitative (Paquet, Gavrancic, Gagnon, Duchesne, 2010) there is little evidence on how to measure the concept of recognition. This paper discusses the limitations on the existing tools and presents the initial test and validation of a model of work recognition.

In this research we used a mixed methodology, combining quantitative and qualitative research methods. 40 individual interviews were realised and a questionnaire based on the proposed model was completed by 1,400 employees of a public company. The questionnaire measured 22 aspects underling four dimensions of the model. The model strength and relationships among factors were examined using multiple linear regression analyses.

Results confirm that the model is highly significant and that four independent variables together predict work recognition. This research discusses theoretical and practical implications, mainly how this model, if used throughout occupational health interventions, helps to identify actions and recognition practices at work that can enhance employees' health.

Ageing Workforce in the Educational Sector: An Exploratory Study

Gloria Guidetti, Sara Viotti, Marco Ferrara, Valentina Trotta, Daniela Converso

University of Turin, Department of Psychology, Turin, Italy

Demographic ageing, is prolonging working life and, subsequently contributing to pension system reform. Italian workers will remain in the job market until the age of 60-65. Especially in the educational sector, teachers of primary, middle and nursery schools, are engaged in mentally and physical stressful job because of the important challenges that are present in contemporary society: insufficient personnel, heavy responsibilities, poor working conditions, high expectation from society and parents and a steady increasing of the ageing work-force (Wu et al., 2002).

The issue that concerns aging and working is the imbalance of functional capacities and work demands. Three groups of risk factors are crucial in creating this imbalance: physical demands, environmental factors and factors related to work organization (Ilmarinen, 1994). Since 2012, a convention has been developed by the Department of Psychology (University of Turin) together with Turin City-Hall. The present study, emerging as part of that collaboration, was aimed at 1) analyzing the level of work ability of aging nursery teachers 2) identifying - within factors that describe organizational, social and job characteristic - the moderators of the relationship between age and workability.

All aged nursery teachers (about 800, min: 50 years) employed at the educational sector of the City of Turin will be contacted in order to fill out a self-report questionnaire that contains: a socio-demographic section, an Italian adaptation of the Work Ability Index (WAI) and several subscales aim at capturing job, social, organizational and individual characteristics (JCQ, Karasek et al. 1991, Kristensen et al. 2005).

Findings of this study (available from January 2014) could increase scientific knowledge on the issues of the aging workforce in educational sectors and provide suggestions for the health promotion of the older people that work with infants and children.

Improving organizational prerequisites for public sector managers – a follow-up study with long-term effects

Erik Berntson¹, Annika Härenstam², Hans Lindgren², Anders Pousette², Stefan Szücs²

¹*Department of Psychology, Stockholm University, Stockholm, Sweden,* ²*University of Gothenburg, Gothenburg, Sweden*

Organizational interventions have been suggested to be important instruments in order to improve working conditions as well as employee health and well-being. Even though such studies are relevant the effects are difficult to measure (Nielsen, 2013; Nielsen & Abildgaard, 2013). There is an ongoing discussion on why it is difficult to measure and how to do it. One aspect of this is when the effects are prevalent. In the present study we focus on long-term effects of an intervention. The study is a survey-feedback intervention directed at managers in public sector authorities. The purpose of the intervention, which was a participatory intervention, was to improve organizational prerequisites for the managers in the study.

In a previous investigation of the effects of the intervention, the short-term effects were studied, implying mixed results. There was a tendency of a positive effect among those intervention organizations that also had a successful implementation process. On the other hand, in those organizations with an unsuccessful implementation process, the results came out negative. In the present study, the aim is to investigate long-term effects of the participatory intervention, regarding work conditions among public sector managers.

In this study 720 managers participated. There were six intervention organizations and 22 controls, located in seven local authorities in Western Sweden. Questionnaires were answered pre and post intervention (in 2009 and 2011). In addition, register data were used and interviews made, providing a multi-method approach. During the intervention year, process support was provided. The focus of the quantitative measures was to investigate if working conditions improved as a result of the intervention. Variables such as resource problems, conflicts of logics, illegitimate tasks, supporting structures, hindrance, managerial problems but also factors such as span of control, performance and perceived stress were measured. In the present study, a follow-up questionnaire will be answered by one of the intervention organizations. Results from this third questionnaire will be analyzed and presented.

Daily Rewarding Interactions Role in Enhancing Daily Well-Being Levels in Workers

Raquel Rodríguez-Carvajal, Marta Herrero, Rocío López-Diago, Oscar Lecuona
Universidad Autonoma de Madrid, Madrid, Spain

Vitality is an important aspect of well-being which is linked to desirable outcomes in the organizational field. Nevertheless, the work context may constitute a resources consuming environment which may influence on well-being deterioration. Based on Conservation of Resources theory (Hobfoll, 1998), it is expected that sleep hours and non-sedentary activities after-work may help to increase levels of vitality at the beginning of the work-day when controlling by affect levels. Likewise, rewarding interactions at work are expected to provide resources that may help to maintain daily vitality levels.

A diary study applied to workers (N=110) was carried out during five consecutive days three times per day: before and just after work and before going to sleep. Data were analyzed through MLwiN 2.28.

Results support that before-work vitality is positively related to positive affect levels ($b = .642, 0.037$) and sleep hours ($b = .094, 0.026$), while is negatively related to negative affect ($b = -.273, 0.044$) and prior day sedentary activities ($b = -.004, 0.001$). Further, night vitality is positively related to positive affect ($b = 0.189, 0.056$), rewarding interactions at work ($b = .225, 0.052$) and before-work vitality ($b = .309, 0.053$). These results show that, while recovery activities may provide resources at the beginning of work-day, social organizational factors are important processes as resource facilitators to preserve well-being levels along the work-day.

Academic Justice, Academic Engagement and its Role in Performance in a Pre-Occupational Sample

Ramon Rodriguez Montalban, Isabel Martínez Martínez, Marisa Salanova Soria, [Israel Sanchez Cardona](#)

Universitat Jaume I, Castellon, Spain

The study of justice has gained considerable attention from different scholars in organizational sciences. However, justice perceptions in the academic context have largely not been studied, even though universities as organizations provide the space to study justice on two possible fronts: 1) from the traditional organizational justice perspective from the employees; 2) from the students as universities stakeholders in the form of academic justice. We conceptualize academic justice as the perceptions that students have about what is fair in their academic setting. Based on the Social Exchange Theory, and by means of social comparison, people tend to be more proactive and motivated when perceived they are being treated with dignity and respect. Previous evidence in the occupational health psychology and organizational behavior literature shows that when people believe that they are being treated fairly, they feel more engaged with their work. In line with this, from an occupational health perspective, we argue that academic justice is positively related with academic engagement. Academic engagement refers to a positive motivational state related to academic activities composed by vigor, dedication, and absorption. Engagement has been commonly related to performance in work and academic settings and other forms of individual wellbeing.

Based on this, we hypothesize that academic justice is positively related to academic engagement. Moreover, we hypothesize that academic engagement mediates the relationship between academic justice and academic performance (GPA and self-rated performance). We tested our hypothesis using structural equation modeling with a 965 pre-occupational sample. Results provide support to our hypothesis showing that: 1) academic justice and engagement are positively related ($\beta = .38, p < .01$); 2) academic engagement and academic performance are also positively related ($\beta = .13, p < .05$); and finally, 3) academic engagement partially mediates the relationship between academic justice and academic performance.

These results highlight the relevant role of justice to generate positive motivational states and improving performance in academic settings. This initial evidence suggests the importance of studying justice for developing healthy academic contexts and to improve students' wellbeing. In addition, it offers a potential line of study examining the different antecedents and consequences of justice in academic contexts in order to promote individual wellbeing.

Emotional health of university students in Austria: Socio-economic differences

[Elisabeth Noehammer](#), Claudia Lugger-Deutschmann, Elfriede Thanecker

UMIT - University for Health Sciences, Medical Informatics and Technology, Hall in Tyrol, Austria

Background: Higher education is highly correlated to a higher socio-economic status and better health (Deaton, 2003). However, little is known about health issues during the process of acquiring that education, which can be a financially difficult period. Tough finances are

thought to be a negative stressor. Often, this situation is not automatically resolved after finishing ones' studies (job seeking phase, debts, etc.), which may lead to a stabilization of negative low-budget induced health behaviors. Thus, the university setting as the "workplace" of students is highly relevant for health promotion.

Objective: In order to develop intervention strategies, a study on student health was done regarding physical, psychological, social and monetary issues using the example of Austria. The focus of this paper is on emotional health and socio-economic differences.

Methods: A quantitative online questionnaire was developed based on literature and existing validated questionnaires on health. This was announced to all universities in Austria and made available to those who agreed to participate. In total, the dataset resulted in over 15,000 cases. The emotional health status and coping strategies were analyzed using frequency analysis, correlations, factor analyses, regression analyses, and various non-parametric tests.

Results: Studying at a private university and having a high financial status seem to be related to a better work-life balance and better ability to relax and regenerate. The opposite is true for seeking professional help, which is also more likely for students living alone. The latter also score higher on ability to relax and regenerate. Studying at a university of applied sciences and having a lower financial status lead to higher scores on negative performance orientation. Students of private universities and students with lower financial status are more likely to engage in substance abuse.

Implications: In line with theory, low financial status is a serious health risk. However, our results imply that students with monetary problems are more open for professional help than the others, which can be used as a resource. Students with child care responsibilities and students of universities of applied sciences should be prioritised, as those groups often face multifaceted double burdens and little resources.

Retaliation and Displacement of Aggression towards Customers: The Moderating Role of Emotional Labour

Nicole Wilson, Michelle Inness

University of Alberta, Edmonton, Alberta, Canada

When employees mistreat customers there can be serious negative consequences for organizations, including decreased sales (Schneider et al., 2005) and negative word-of-mouth (Zeelenberg & Pieters, 2004). This study examines the impact of employees' own experiences as targets of aggressive customers, and supervisors and co-workers on their aggression towards customers, and how different forms of emotional labour moderate these relationships.

Customer-targeted aggression may be enacted by employees as a form of retaliation due to aggression from customers (e.g., Wang et al., 2011), or because of displacement of aggression when the employee experiences aggression from organizational insiders. Aggression displacement theories posit that people may not retaliate against someone who is mistreating them if doing so is risky (Marcus-Newhall et al., 2000). For example, when employees experience aggression from organizational insiders, they may be reluctant to retaliate given the potential consequences for their resulting work outcomes. By contrast, customers are available, relatively anonymous, and have limited power.

Our research expected and found that customer-targeted aggression may arise from both retaliation and displacement. We also hypothesized that four forms of emotional labour (i.e., faking positive and negative emotions, suppressing positive and negative emotions) would moderate retaliation and displacement. Given that retaliation occurs when the individuals' feel provoked and have built-up anger, we found that suppression (i.e., inhibition of emotions) moderated the retaliation relationship. When employees are required to suppress negative emotions customer-targeted aggression was reduced, but when they were asked to suppress

positive emotions, customers-targeted aggression was increased. Customers may be safe targets for displaced aggression when the organization requires that employees fake negative emotions and unsafe targets when employees fake positive emotions. We found that aggression was exacerbated when employees faked negative emotions and buffered when they faked positive emotions. Aggression was also buffered when employees suppressed negative emotions.

Findings suggest that suppressed and faked emotions involve separate and perhaps sequential processes, in which emotions have to be suppressed before faking of emotions can occur.

Creative Self-efficacy, Work Engagement, and the Moderating Role of Openness to Experience: A Resource Perspective

I-Shuo Chen¹, Jui-Kuei Chen²

¹Trinity College Dublin, Dublin 2, Ireland, ²Tamkang University, Taipei, Taiwan

The aim of this study was to examine the relationship between creative self-efficacy and work engagement using openness to experience as a moderating role. The theoretical background was rooted in the resource perspective of the Job Demands–Resources model (JD-R model) of work engagement.

Two hypotheses were tested among 101 faculty members from a science and technology institute in the United States. We hypothesized that creative self-efficacy has a positive effect on work engagement and openness to experience has a moderating effect on the addressed relationship. Altogether, 101 faculties completed a self-report questionnaire and indicated their levels of creative self-efficacy, work engagement, and openness to experience.

The results supported a positive effect of personal resources (e.g., creative self-efficacy) on work engagement but did not support a moderating effect of dispositional factor (e.g., openness to experience) on the effect of personal resources (e.g., creative self-efficacy) on work engagement. The end of this study provides theoretical and practical recommendations and suggestions for future research.

Workplace Response to Breast Cancer: A Qualitative Investigation of Psychosocial Factors in the Context of Serious Illness

Lucie Kocum, Catherine Loughlin, Lynne Robinson, Jennifer Dimoff
Saint Mary's University, Halifax, Nova Scotia, Canada

This year, over a quarter million women in North America will face a breast cancer diagnosis. Fortunately, most will survive; however, the negative impact of the disease can persist long after it is in remission. Although several factors influencing the return-to-work experience of breast cancer survivors have been identified, including employer accommodations, surprisingly little research in occupational health psychology has probed the details of how we can better create psychologically healthy workplaces capable of adequately accommodating individuals with serious illnesses. In the present qualitative interview study, we explore the psychosocial factors that serve as drivers of and/or barriers to a psychologically healthy workplace response to breast cancer. Our aim is to shed light on what successful workforce re-entry looks like in the case of women who have experienced breast cancer.

In all, 19 participants aged 40 to 66 (M age = 50 years, SD = 7.62 years) who experienced breast cancer within the past five years and who were working at the time of diagnosis, were interviewed. Ten psychosocial factors (job content; workload and work pace; work schedule; control; environment & equipment; organizational culture and function; interpersonal relationships at work; role in organization; career development; and home-work interface; Hurrell & Murphy, 1991) were probed using theory-driven thematic analysis.

The most compelling finding was the overarching theme of “control over conditions of work.” Rather than any specific accommodation(s), *per se*, we found that it was the workers’ job control that distinguished successful workforce re-entry from unsuccessful re-entry. The extent to which women had control over workload and pace and work schedule, and job content, and the extent to which they participated in crafting their own accommodation(s), determined the success of their return to work. Based on these findings, and because the experience of each woman with breast cancer is unique, we do not recommend a “one size fits most” set of accommodations. Rather, we contend that an increase in control over the conditions of work, in which the survivor has significant input in designing her accommodations, is the key factor in her successful return to work.

Stress-actors Relation Retrospective Analysis through Pubmed Publications, Over the Past 23 Years

Ramona Jurcau¹, Ioana Jurcau², Razvan Pirvan³, Nicolae Colceriu⁴

¹*Department of Pathophysiology, „Iuliu Hatieganu” University of Medicine and Pharmacy, Cluj-Napoca, Romania,* ²*Pediatric Clinical Hospital, Cluj-Napoca, Romania,* ³*Faculty of Medicine, University of Oradea, Oradea, Romania,* ⁴*University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania*

Background: The stress (S) of the actor (A) profession is a reality, increasingly investigated.

Aims: Through this study, we aimed to evaluate the research concerning the S-A relationship, by the retrospective analysis of Pub Med publications over the past 23 years.

Methods: We evaluated the S-A relationship for 1990-2012 period, considering: a) key words "S and A" (SA), "S and A and Cortisol" (SAC), "S and A and Psychological tests" (SAP); b) The six-month average for 1990-1999, 2000-2009, 2010-2011 periods and for 2012 year, from January to June; c) some selection filters provided by PubMed site: Text availability - Abstract available (AB), Full text available (FT), Free full text available (FFT); Species - Humans (H), Other Animals (OA); Sex - Male (M), Female (F). Statistical evaluation was made on the basis of the Student test.

Results: There were differences between the six-month averages for 1990-2012 periods. A) Significant: a) for the total number (T) of publications, AB and FT, compared each of them to the FFT; b) between OA and H species; d) between SA and SAC, SA and SAP, SAC and SAP. B) Insignificant: between M and M+F, F and M+F.

Conclusions: 1) The total number of publications over 23 years was 130 for SA, 1 for SAC and 9 for SAP. 2) The FFT count was particularly low relative to T, AB and FT. 3) studies with human subjects, especially female participants were highest cited. 4) SAC, and SAP combination represent a small percentage of SA, for all filters and time periods examined.

Expanding the Occupational Health Methodology: A Concatenated Neural Network Approach to Model the Burnout Process in Chinese Nurses

Felix Ladstätter^{1,2}, Eva Garrosa², Bernardo Moreno², Vicente Ponsoda², Liang Youxin³

¹*IE University, Segovia, Spain,* ²*UAM, Madrid, Spain,* ³*Fudan University, Shanghai, China*

In the present study neural networks, a relatively new prediction tool which is capable of extracting complex, nonlinear relationships between predictor (input) and predicted (output) variables, are used to explore nonlinearities in the hardiness moderated antecedents–burnout–consequences relationship.

Specifically, two multi-layer perceptrons (MLPs) are concatenated in an attempt to model the composite nonlinear burnout process. Sensitivity analysis, a Monte Carlo based global simulation technique is then utilized to examine the first order effects of the predictor variables on the burnout sub-dimensions and consequences.

Results show that (1) this concatenated neural network approach is feasible to model the burnout process, (2) sensitivity analysis is a prolific method to study the relative importance of predictor variables, (3) the relationships among variables involved in the development of burnout and its consequences are to different degrees nonlinear.

Consequently, a concatenated neural network approach helps in the development of preventive programs of burnout in work contexts, since it takes into account nonlinear relationships between variables resulting in more precise prediction results.

Cultural activities at work as a form of mental recovery and organizational health?

Camilla Kylin

Karlstad University, Karlstad, Sweden

The working life has in the latest decades undergone several developments that entail both threats and challenges. Many reports show trends of increasing occupational stress in organizations in many European countries. Although much research has been done and models increase our knowledge on the field of stress, further research is needed in specific about recovery processes. Recovery can occur when a person is out of harm and distanced from demands. Recovery can also occur when individuals need to be engaged in positive distractions (Sonnentag, 2001; Zijlstra & Cropley, 2006).

This research project aims to investigate the meaning and impact of cultural activities during work on perceived work satisfaction and health of employees in different organizations. The intention is to study the impact of cultural activities as a form of positive distraction for employees to detach from work and to recover mentally from regular work tasks and routines. Cultural activities refers to consuming or actively taking part in cultural activity (such as for instance listening to a concert, listening to poetry readings, singing in choir, handcraft activity) during working hours. Previous research has shown that engagement with creative activities and attendance at cultural events may contribute toward reducing stress and increase health in individuals (Stuckey & Nobel, 2010; MacDonald, Kreutz & Mitchell, 2012).

In alignment with previous research that show positive associations between cultural activities and health in general population (Bygren & Konlaan, 1996; Konlaan, 2001; SOU, 2000:91), the follow up study will study this association in a working life setting. It is expected that there will be positive association between cultural activity, work satisfaction, perceived health as well as work engagement. Project design is to start with an interview study and follow up with questionnaire study. Data will be collected in different organizations such as a university, a paper process company, and a handcraft company.

Forensic Assessment of Workplace Mobbing: The Role of the Ergonomics And Human Factor Expert

Julio Rodríguez-Suárez, Javier Llana-Álvarez

University of Oviedo, Oviedo, Asturias, Spain

Introduction: Workplace harassment or mobbing assessment in judicial contexts remains a complex issue, although it is one of the most researched areas in occupational psychopathology, with an increasing social impact. In this sense, the difficulties regarding establishing of evidence, make expert reports a useful tool because of its indisputable probative value.

Methods: This research studies the influence of forensic ergonomists in judicial proceedings. Methodologically, several research techniques have been used: analysis of real cases, scales applied to 356 members of the Spanish Ergonomics Association (97 responses), 9 in-depth interviews with key informants (ergonomists, lawyers, judges), two-phases Delphi panel (26 and 21 participants), and, especially, workplace harassment expert reports.

Results: According to our results, it is necessary to distinguish between psychosocial risk and occupational psychopathology assessment. In this sense, we recommend studying workplace mobbing as an occupational risk.

Conclusion: In conclusion, to assess workplace mobbing it is desirable to target working conditions rather than individuals. Therefore, specialists in ergonomics and human factor seem to be also appropriate experts on workplace mobbing cases.

A Longitudinal Study of Work Commitment in Student Nurses

Andrew Clements

University of Bedfordshire, Bedfordshire, UK

There are presently issues with retention on nurse education programmes. It is essential that there is a new generation of qualified nurses to replenish the profession, particularly given the implications of present staffing shortages for patient safety. A key part of student nurse education is the clinical placement. Clinical placements provide student nurses the opportunity to develop their skills and to apply theory in a working environment. However, clinical placements can be a source of stress for student nurses, due to issues such as workload and relationships with staff members.

This study aims to examine the changes in student nurse commitment to nursing, wellbeing and turnover intentions, in the context of perceived support over the course of a clinical placement. Student nurses will be recruited to complete a mostly quantitative questionnaire before and after they complete a clinical placement. At present 38 student nurses have completed the questionnaire before and after a single clinical placement. Further recruitment is currently in progress. Variables measured quantitatively include perceptions of support, commitment to nursing, wellbeing, attitudes to helping fellow students, and turnover intentions. Quantitative data will be analysed using structural equation modelling. Three open ended questions are included to obtain qualitative data regarding experiences that student nurses perceive as influencing their commitment, and to gather further information regarding support perceptions. Qualitative data will be analysed using content analysis. Discussion of the results will focus upon suggestions for improving student nurse retention.

Towards the Development of a Permanent System for the Assessment of Workers' Perception of Health and Safety Risks at Work: An Italian Survey

Fabio Bocconi, Benedetta Persechino, Cristina Di Tecco, Matteo Ronchetti, Bruna Maria Rondinone, Antonio Valenti, Sergio Iavicoli

Inail Research Area, Rome, Italy

Objectives: The last decades have seen significant developments in the economic, political, technological and social landscape as well as in the nature of work that has been re-shaped under these impacts. All these changes have had a high impact on workers' health and have lead to several improvements in health and safety policies framework at European and national level, particularly the Legislative Decree 81/08 in Italy. Recently, a national survey has been developed by INAIL (Italian Workers' Compensation Authority) to develop a systematic system to explore the employees' perceptions of health and safety at work. On the basis of similar international experiences, this survey aimed to identify workers' perception of health and safety risks at work and to assess the degree of awareness of both the implementation of Italian Legislative Decree no. 81/08 and the occupational safety and health (OSH) management system.

Methods: Starting from a literature review and a benchmarking analysis of the main national and European surveys, a questionnaire has been developed and administered to a sample of 8,000 workers through CATI interview, with the technical support of TNS Italy. Then, a debate was opened with the main stakeholders involved in the OSH policies at national level to

discuss the contents of the survey as well as an international workshop with the most prominent European experts on surveys. As result of such meetings, some validated scales and items were included in the questionnaire. Finally, a pilot on 50 workers were conducted to provide a preliminary test of the interview.

Results: The main areas identified and included in the questionnaire are the follows: socio-demographics, psycho-physical health, topics related to OSH, working conditions, occupational risks and OSH professionals' role. Among the main findings, some differences in the perceptions of working conditions and of OSH professionals' role emerged related to socio-demographic and occupational variables, such as type of contract (85% permanent contract, 15% fixed term one), profile (47% blue-collars, 41% white collars, 9% managers) and organizational size.

Conclusions: This survey represents a unique case in Italy in terms of the sample's dimensions and representativeness as well as for the involvement of different OSH professionals. This experience may open the way to the development of a permanent system for the assessment of workers' perceptions of health and safety risks at work in Italy, that could take into considerations changes in the world of work and workforce, and pressing needs of the actors involved.

Protection of Worker with Disability: Reasonable Accommodations

Benedetta Persechino, Patrizia Laurano, Grazia Fortuna, Antonio Valenti, Sergio Iavicoli
Inail Research Area, Rome, Italy

Objectives: As set out by Directive 200/78/EC and UN Convention on the Rights of Persons with Disabilities of 2006, "reasonable accommodations" should be provided to persons with disabilities to afford them their human rights. These provisions are a relevant tool to promote an integrated approach for guaranteeing the right to work and ensuring the occupational health and safety of persons with disabilities. This study is aimed at analyzing the opinion of occupational physicians about "reasonable accommodations".

Methods: A fact-finding survey on "workers suffering from and surviving cancer" conducted among a sample of occupational physicians revealed their opinion on both the provision of reasonable accommodations in the workplace and job retention of people with disabilities.

Results: More than 50% of respondents agree that reasonable accommodations favour job retention for people with disabilities and that the role of occupational physicians is key in providing them. Furthermore, in terms of competences required for occupational physicians training, "reasonable accommodations" is one of the most interesting issues.

Conclusions: "Reasonable accommodations" can be plausibly considered a relevant tool to develop an integrated approach for guaranteeing the right to work and ensuring occupational health and safety of persons with disabilities; according to the European Agency for Safety and Health at Work, in fact, "a workplace that is accessible and safe for people with disabilities is also safer and more accessible for all employees".

The Changing World of Work in the Italian Nursing Sector: The Impact on Nurses Mental Health and Their Intention to Leave the Profession

Antonio Valenti, Cristina Di Tecco, Valeria Boccuni, Antonella Oliverio, Pasquale Fruscella, Sergio Iavicoli
Inail Research Area, Rome, Italy

Objectives: In the last decades, the global labour market has been characterized by huge changes in the organization of work. The workforce is rapidly changing and particularly for nurses. In Italy there is a growing shortage of nurses mainly due to early retirement and

insufficient entry of nurses from training programmes. In addition to the low number of new recruits there is a widespread phenomenon of leaving the profession, mainly due to policies favouring newer flexible work contracts with consequently unfavourable working conditions (e.g. shift work, increasing demands, lack of social recognition). Alongside this, migration of foreign nurses has been facilitated to face these problems. Consequently the impact on nurses' mental and physical health is under investigation. The present study is aimed at exploring the impact of such changes in the nursing sector in Italy and its possible impact on occupational safety and health (OSH), with a special focus on work-related stress and its possible consequence on nurses intentions to leave the profession.

Methods: As a first step, a review of the scientific literature on this topic has been conducted. Then, a questionnaire was developed and will be administered to a large sample of Italian nurses in order to identify "gaps and needs" in OSH for nurses.

Results: In Italy there is a growing shortage of nurses mainly due to early retirement and insufficient turnover of new nurses. According to IPASVI out of a total of 375,000 active professional nurses, 38,000 are foreign, mainly from European countries. The Italian Workers' Compensation Authority (INAIL) estimates, in 2008, about 34,500 occupational injuries in the healthcare sector, a slight decrease in recent years. On the contrary, in the same period, the injuries among foreign workers increased by 19.5%.

Conclusions: The growing shortage of nurses increases nurse workload, stress at work and clinical risk, reducing working satisfaction and the quality of patient care. Special attention should be focused on migrant nurses because of their higher vulnerability. It is important to understand how these changes affect nurses, and what factors in the working environment cause the greatest burden in order to contribute to the development of methodologies, training and information tools for the evaluation and management of occupational risks related to the nursing profession.

The Impact of Early Maladaptive Schemas in the Workplace: Moderation of the Effect of Occupational Role Stress on Anxiety and Depression

Gema Ruiz de Huydobro, Izaskun Orue
University of Deusto, Bilbao, Spain

New actions are needed to reduce the prevalence of mental disorders in the workplace. Thus, the aim of this research was to broaden the knowledge regarding the effect of workers' cognitive vulnerabilities, namely early maladaptive schemas (EMS), derived from the Schema Therapy Model (Young, Klosko and Weishaar, 2003), on anxiety and depression symptoms. In addition, the role of EMS as moderators of the association between role stressors and symptoms was examined.

A sample of Spanish workers (N=741) was asked to complete the Role Ambiguity, Role Overload and Role Conflict Scale (Abdel-Halim, 1978), the Symptom Assessment-45 Questionnaire (SA-45) (Depression and Anxiety scales; Davison, 1997), and the Young Schema Questionnaire-3 (Young and Brown, 2006).

Mistrust, self-sacrifice and insufficient self-control EMS were positively associated with depression, while dependency and self-sacrifice were associated with anxiety. Furthermore, results also confirmed that EMS moderated the association between role stressors and anxiety and depression symptoms. Different patterns of moderation emerged. Workers with high levels of failure, grandiosity and self-sacrifice EMS displayed more intense symptoms of anxiety (diathesis-stress conceptualization) when facing role stressors. However, workers high in self-sacrifice, insufficient self-control and dependency EMS showed lower levels of anxiety and depression, suggesting that they were already experiencing these symptoms regardless of the presence of role stressors (hyper activated schema conceptualization).

Results indicate that occupational hazard prevention and intervention policies should focus on occupational stressors, but also that psychological techniques derived from the Schema Therapy Model could be applied in the treatment and prevention of anxiety and depression symptoms in the workplace.

An analysis of the coverage of psychosocial factors at work in Corporate Social Responsibility standards

Daniel Mari Ripa, Aditya Jain

¹*University of Oveido, Oveido, Spain*, ²*Univeristy of Nottingham, Nottingham, UK*

Introduction: Psychosocial hazards at work can lead to negative physical, psychological and organizational outcomes. Prevention and management of psychosocial hazards is therefore essential, but, at global level, there are few specific regulations to address them at work. At times, interventions to manage these hazards fall under corporate social responsibility (CSR) programs, which indirectly aim to reduce stress, harassment or violence at work, by improving working conditions. However, little is known whether CSR standards adequately cover psychosocial hazards. This paper seeks to address this gap by analyzing the extent to which psychosocial hazards are included in CSR standards.

Methods: After an extensive review of CSR standards, 28 were selected according their international relevance and extent of coverage. Framework analysis was used (Ritchie and Spencer, 1994) and ten psychosocial hazards outlined by the WHO (2003) were used as the analytical framework. Then, standards were thematically analyzed and their themes matched with the ten psychosocial hazards.

Results: While psychosocial factors relating to work schedules, control at work, physical work environment and equipment, career development and home-work interface were covered by at least some standards, there was hardly any coverage of psychosocial factors related to job content (such as lack of variety, meaningless work, under use of skills), and role in the organization (such as role ambiguity, role conflict, and responsibility for people). In factors such as organizational culture and function, the focus was on non-discrimination, and interpersonal relationships at work were mainly limited to harassment, bullying and violence. Hazards such as work pace, low support for problem solving and personal development, poor relationships with superiors, and lack of social support, were not found to be included in CSR standards.

Discussion: Although not all psychosocial hazards are equally considered in all standards, this research suggests that CSR standards can be used to prevent psychosocial risks. They could help companies go further than meeting requirements of existing legislation, in new areas such as employee well-being. More attention should be paid to psychosocial risks insufficiently considered, which would also lead to more effective CSR standards.

AUTHOR INDEX

- Aaron Schat, 218
Achim Elfering, 180, 191, 199, 200
Adalgisa Battistelli, 326
Aditya Jain, iii, 209, 229, 251, 354
Agnès Van Daele, 291
Agnessa Kozak, 328
Aileen Pidgeon, 141, 158, 279
Akbar Husain, 301
Aki Koskinen, 103
Akram Vaferi, 270
Alain Marchand, 197
Alain Piette, 18
Alan Cavaiola, 140
Albert Nienhaus, 328
Aldo Aguirre-Camacho, 116
Aleka MacLellan, 107
Alessandro Marinaccio, 227
Alessia Negrini, 293
Alexandra Beauregard, 9
Alexandra Marques Pinto, 322
Alexandra Michel, 71, 73, 81, 235
Alfredo Rodriguez, 116
Alfredo Rodríguez-Muñoz, 29, 79
Ali Bassam Mahmoud, 93
Alia Al Serkal, 262, 343
Aline Drapeau, 298
Alison Godwin, 305
Allison Milner, 220
Almuth McDowall, 9, 11, 12
Amanda Allisey, 52, 53, 250
Amanda Griffiths, 62, 63, 263, 274, 286
Ambar Deschamps Perdomo, 333
Amélia-Rose Read, 279
Amy Zadow, 137
Ana I. Sanz-Vergel, 79
Ana Isabel Sanz-Vergel, 26, 29
Ana Maria Rossi, 277
Anabel Camacho-Ávila, 321
Anat Drach-Zahavy, 148
Anders Degn Pedersen, 159
Anders Pousette, 345
Anders Skogstad, 60
André Esser, 112
Andreas Friis Elrond, 222
Andreas Stenling, 289
Andrée Demers, 197
Andreina Bruno, 245
Andrena Pierre, 36
Andrew Clements, 351
Andrew Hanna, 158
Andrew Neal, 251
Andrew Noblet, 52, 53, 250
Andrew Weyman, 183, 317
Andy Smith, 174, 222, 281
Angela Martin, 52, 220
Angela Neff, 182, 230
Angeli Santos, 100, 171, 190
Angelika Bader, 201
Anique van Lent, 194
Anit Somech, 148
Anita Baghdassarians, 270
Anita C. Keller, 242
Anita Dunkl, 118, 236
Anita Eskildsen, 159
Anita Keller, 180, 199
Anita Kurmann, 255
Anita Wiemer, 186
Anja Gerlmaier, 237
Anja Van den Broeck, 68
Ann Fridner, 296, 303
Ann McInnis, 44
Ann Rudman, 254, 327
Anna Anund, 104
Anna Geraedts, 122, 127
Anna Maria Berardi, 344
Anna Paolillo, 327
Anna Steidle, 70, 71
Annabelle Neall, 233
Anna-Karin Hurtig, 288, 292
Anna-Laura Schmitz, 231
Anne Helene Garde, 222
Anne Jespersen, 228
Anne Kouvonon, 145
Anne Mäkikangas, 81, 82, 83, 96
Anne Punakallio, 185
Anne Richter, 94, 98
Annekatriin Hoppe, 71, 170, 271
Annemarie Fridrich, 89, 90
Annemarie Hultberg, 164
Annet Kleiboer, 127
Anni Skipstein, 154, 194, 314
Annie Foucreault, 269
Annie Høgh, 209
Annika Härenstam, 316, 345
Annika Smit, 87
Annina Ropponen, 103
Anthony LaMontagne, 52, 53, 250
Anthony Montgomery, 239
Antje Schmitt, 153
Antonella Oliverio, 352
Antonio Leitao da Silva, 85
Antonio Marques, 85, 284
Antonio Valenti, 226, 351, 352
Anu Virovere, 149

Aram Seddigh, 270
 Ari Väänänen, 145
 Ariane Wepfer, 252
 Arjella Van Scheppingen, 224
 Arla Day, 41, 106, 108, 109, 133, 134
 Arnold B. Bakker, 27, 28, 29, 56, 79, 168, 248
 Arnold Bakker, 82, 168, 202, 225
 Arpalak Paksaihol, 273
 Arturo Juárez-García, 321
 AS Nizam Isha, 100
 Åsa Stöllman, 253
 Åse Marie Hansen, 209
 Åshild Bakke, 100
 Asta Suomi, 264
 Astrid Linortner-Rabel, 338
 Audrey Babic, 187, 188
 Aukse Endriulaitiene, 295, 329
 Auli Airila, 185
 Awang Idris, 137
 Ayden Robertson, 305
 Baran Metin, 215
 Barbara Stiglbauer, 239
 Bart Van de Ven, 261, 337
 Basem Gohar, 275, 278
 Basem Goltar, 272
 Beata Basinska, 244, 323
 Beatriz Rabasa, 307
 Behdin Nowrouzi, 147, 272, 275, 278
 Behnam Nowrouzi-Kia, 275
 Benedetta Persechino, 227, 351, 352
 Bernad Batinic, 239
 Bernardo Moreno, 349
 Bernardo Moreno-Jiménez, 116
 Bernhard Sieland, 124
 Bert Schreurs, 94
 Bert Weijters, 337
 Bettina Kubicek, 166, 282
 Birgit A Greiner, 163, 280
 Birgit Greiner, iii, 176, 178, 220, 340
 Björn Karlson, 159
 Bradley Wright, 233, 312
 Breeana O'Brien, 158
 Brett Porter, 296
 Brjánn Ljótsson, 125
 Brooke Baker, 162
 Bruna Maria Rondinone, 227, 351
 Bryan Garber, 35, 37
 Byung Chul Son, 184
 Caleb Leduc, 273, 275, 278, 341
 Callandra Peters, 140
 Calvin Burns, 253
 Camilla Holmvall, 218, 330
 Camilla Kylin, 350
 Carina Fors, 104
 Carlo Tramontano, 175
 Carlos García-Rubio, 117
 Carmen Ramis-Palmer, 121
 Carol A. Wong, 156
 Caroline Bergman, 164
 Caroline Biron, 91
 Caroline Russell, 24
 Carolyn Boyd, 40
 Catherine A Kusnick, 123
 Catherine Loughlin, 348
 Cecile Flahault, 294
 Cecilie Aagestad, 238
 Céline Boudreau-Larivière, 278, 305
 Celine Mühlethaler, 325
 Céline Mühlethaler, 326
 Chae Kwan Lee, 184
 Charlotte Arndt, 276
 Chian-Fang Grace Cherng, 206
 Chiara Consiglio, 203, 204
 Chiara Guglielmetti, 258
 Chiara Knecht, 325, 326
 Chiara Maselli, 161
 Chih-Ying Wu, 263
 Chris Provis, 40
 Christian Dormann, 136, 214, 261
 Christian Korunka, 166, 180, 282, 289
 Christian Uhrenholdt Madsen, 228
 Christiane Stempel, 47, 57
 Christina Bodin Danielson, 270
 Christina Constantinou, 201
 Christine Bosch, 73
 Christine Busch, 48
 Christine Cross, 121
 Christine Dubiniecki, 36, 37
 Christine Grant, 10
 Christine Ipsen, 32, 45, 149, 271, 287
 Christine Syrek, 75
 Christoph Nohe, 77, 81
 Chunhui Suh, 184
 Ciara Farrell, 121
 Clara Mohl Schack, 101
 Clark Calabrese, 221
 Claude Fernet, 169, 332, 334
 Claudia Bernhard-Oettel, 257
 Claudia Lugger-Deutschmann, 346
 Clifford Haimann, 331
 Colin Mackay, 223
 Concettina Fenga, 154
 Conny Antoni, 75
 Constanze Leineweber, 105
 Coralia Sulea, 96
 Corina A. Merz, 152
 Corinne Ebener, 200
 Cornelia Gerdenitsch, 166, 289
 Cornelia Niessen, 182, 230

Cristian Balducci, 259
 Cristina Di Tecco, 226, 227, 351, 352
 Cristina Queiros, 85, 86, 87, 284, 322
 Daantje Derks, 28, 168
 Dan Hasson, 135
 Dana Unger, 182, 230
 Daniel Candinas, 255
 Daniel Gilbert, 172
 Daniel Hultell, 327
 Daniel Mari Ripa, iii, 354
 Daniela Converso, 258, 323, 344
 Danielle Giffin, 65
 Danielle Valcheff, 275, 278
 Darius Mihai Turc, 315
 David Boulos, 35, 37
 David Ebert, 124, 125, 126, 128
 David Glasscock, 328
 David Hollis, 209
 David Hurtado, 179, 290
 David Palferman, 223
 David Paniagua, 117
 David Wainwright, 317
 Dawn Eubanks, 121
 Dawn Querstret, 173
 Deanna Burns, 162
 Deanne N. Den Hartog, 153
 Debbie Cohen, 192
 Debby Beckers, 77, 102, 105
 Debora Vansteenwegen, 195
 Deirdre O'Shea, 72
 Delia Virga, 210
 Dervla Hogan, 178, 220
 Désirée Füllemann, 32, 47
 Désirée Stocker, 131, 132
 Despoina Xanthopoulou, 26, 27
 Diana Pereira, 191
 Diane Belanger-Gardner, 147, 272
 Dianne H. Gardner, 242
 Dimitri van der Linden, 82, 168
 Dina Themistocleous, 317
 Dirk Lehr, 122, 124, 125, 126, 128
 Dominic Micklewright, 193
 Donatienne Desmette, 305
 Dorien Vanhercke, 156
 Dorota Reis, 271, 276
 Dorota Szczygiel, 200, 299, 308
 Dragos Iliescu, 96
 E. Kevin Kelloway, 43, 44, 60, 213
 Eberhard Pech, 22
 Edwine Goldoni, 305
 Efharis Panagopoulou, 239
 Eija Räikkönen, 182
 Eirik Bjerkebæk, 99
 Elena del Barrio, 117
 Elena Heber, 128
 Elena Romanova, 205
 Elfi Baillien, 94, 97
 Elfriede Thanecker, 346
 Eliane Holzer, 131
 Elianne van Steenberg, 80
 Elinor Schad, 159
 Elisabete Borges, 284
 Elisabeth Noehammer, 335, 338, 346
 Elizabeth Eades, 24
 Elizabeth Hellier, 183
 Elizabeth R Mackenzie, 123
 Elizabeth Scott, 177
 Ellen Peeters, 155
 Ellen Rukholm, 147, 272
 Els Vanbelle, 68
 Elvira Micali, 154
 Emma Donaldson-Feilder, 13
 Emma O'Donnell, 233, 312
 Emma Wray, 25
 Eric Brangier, 171, 174
 Eric Laurent, 297
 Erich Latniak, 237
 Erik Bertson, 237, 316, 345
 Erik Bertsson, 270
 Erik Lundkvist, 307, 331
 Erin Fekete, 123
 Estela M. Pardos-Gascón, 298, 307
 Estela Montejo Martín, 261
 Esther Canonico, 9
 Esther Hauer, 307, 337
 Esther M. García-Buades, 121
 Eugenia McGrath, 116
 Eunbi Chang, 113, 114
 Eva Bamberg, 256, 328
 Eva Charlotta Nylén, 246
 Eva Cifre Gallego, 210
 Eva Demerouti, 314
 Eva Garrosa, 115, 116, 117, 349
 Eva Stettler, 131
 Eva Torkelson, 159
 Eva Vingård, 253
 Eva Winkler, 48
 Evangelia Demerouti, ii, 5, 26, 56, 79, 80,
 225
 Evangelina Demerouti, 248
 Evelyn Kortum, 19, 306
 Ewelina Smoktunowicz, 185, 240
 Fabio Bocconi, 351
 Fabrice Travaglianti, 188
 Fehmidah Munir, 142, 267
 Felix Ladstätter, 349
 Florence Stinglhamber, 187
 Frances Klaassen, 158, 279
 Francesca Benedetti, 208
 Francis.P. Peree, 310

Franck Zenasni, 294
 Franco Fraccaroli, 259
 Frank D. Belschak, 153
 Franziska Putschögl, 112
 Franziska Tschan, 131, 180, 199, 255
 Frederick G. Lopez, 256
 Fridtjof W. Nussbeck, 152
 Gabriel Fischmann, 96
 Gabriele d'Ettorre, 161
 Gabriele Freude, 21, 22
 Gaia Urso, 175
 Gail Kinman, iv, 9, 11, 38, 39, 49, 50, 152, 268
 Gary Johns, 146
 Gema Ruiz de Huydobro, iii, 228, 353
 Geneviève Baril-Gingras, 91
 Georg Bauer, 32, 47, 67, 68, 196, 252
 Georg F. Bauer, 88, 89, 90
 George Michaelides, 54
 Gerard Zwetsloot, 209, 224
 Gerhard Andersson, 125
 Gerjo Kok, 224
 Gianluigi Lazzarini, 208
 Giedre Geneviciute-Janoniene, 295, 329
 Ginette Herman, 305
 Gisela Mohr, 47
 Gloria Guidetti, 323, 344
 Glorian Sorensen, 179
 Goran Kecklund, 102, 104, 105
 Grazia Fortuna, 352
 Gregor J. Jenny, 89, 90
 Gregor Jenny, 32, 45, 47, 67, 252
 Grit Tanner, 328
 Guido Alessandri, 203, 204
 Guido Beldi, 255
 Guido Offermanns, 219
 Gunnar Aronsson, 246
 Guy Bodenmann, 152
 Guy Faulkner, 216
 Guy Notelaers, 60, 157, 276
 Guy Potter, 21, 22
 Haitham Abdalla Hassan, 268
 Håkon A. Johannessen, 246
 Håkon Johanessen, 238
 Hannah Drewett, 76
 Hanne Thiart, 124, 125, 128
 Hannes Zacher, 251
 Hans De Witte, iii, 68, 92, 93, 94, 95, 96, 97, 98, 155, 156, 169
 Hans Lindgren, 345
 Hans Magne Gravseth, 238
 Hans-Magne Gravseth, 246
 Hazel Melanie Ramos, 181
 Hazem Ben Aissa, 176
 Heather Laschinger, 165
 Hedvik Haaheim-Simonsen, 304
 Hege Forbech Vinje, 304
 Heidi Siller, 201
 Heleen Riper, 124, 125, 128
 Helen McFarlane, 281
 Helena Cooper-Thomas, 116
 Helena Falkenberg, 281
 Henna Hasson, 30, 31, 46, 91
 Heriberto Valdez Bonilla, 207
 Hilary Gordon, 273
 Hilary McDermott, 267
 Hilde Hetland, 248
 Howard Tennen, 42, 43
 Hugo Figueiredo-Ferraz, 280, 298
 Hugo Westerlund, 270
 Hussam Alnusair, 140
 Hylco Nijp, 105
 Hyunjin Jung, 184
 Hyunju Choi, 113, 114, 115
 Iain Coyne, 150
 Iain Wilson, 267
 Ignacio Mahillo, 333
 Igor Portoghese, 326
 Ilona van Beek, 83
 Inés Corts, 79
 Inge Van den Brande, 195
 Ingrid Banovic, 172
 Ingrid Schele, 331
 Ingrid Schéle, 307
 Ioana Jurcau, 349
 Ioana-Daniela Oros, 217
 Irena Tchernitskaia, 52
 Irene de Pater, 76
 Irina Nikolova, 169
 Irvin Sam Schonfeld, 297, 311
 Isabel B. Pfister, 132
 Isabel Carmona, 117
 Isabel M. Martínez, 335
 Isabel M. Martínez, 336
 Isabel M^a Martínez, 161
 Isabel Martínez Martínez, 346
 Isabel Pfister, 131
 Isabella Meneghel, 161, 336
 Isabelle Hansez, 187, 188, 310
 I-Shuo Chen, 348
 Israel Sanchez Cardona, 346
 Israel Sánchez-Cardona, 341
 Ivan J Perry, 163, 280
 Ivan Robertson, 140
 Ivana Igic, 180
 Izabela Wiciak, 244
 Izaskun Orue, 353
 J. Petter Gustavsson, 327
 Jaana Pentti, 145
 Jaco Pienaar, 160

Jacques Marc, 205
 Jacques Perron, 293
 James Grosch, 262, 286
 James Storey, 313
 Jan Schmutz, 211
 Janas M Harrington, 163
 Jane Hopkinson, 247
 Jane Mullen, 60
 Jari Hakanen, 66, 67, 68, 69, 158, 167,
 185, 225
 Jason Devereux, 254
 Jason Lacombe, 216
 Javier Llana-Álvarez, 350
 Javier Martín Babarro, 261
 Jayne Moorish, 213
 Jayoung Lee, 113, 115
 Jean Pierre Gardair, 101
 Jef Syroit, 169
 Jenna C. Shapiro, 42, 43
 Jennifer Born, 36
 Jennifer Dimoff, 135, 348
 Jennifer H.K. Wong, 44
 Jennifer Lee, 34, 35, 36
 Jennifer Lunt, 247
 Jennifer Taylor, 183
 Jenny Head, 281
 Jeong Ho Kim, 184
 Jesper Dagöö, 125
 Jesper F. Hopstaken, 168
 Jesper Kristiansen, 222
 Jesper Löve, 164
 Jessica de Bloom, 234
 Jessica Lang, 109, 110, 111, 112, 324
 Jessica Wakelee, 342
 Jian Shiu, 206
 Joana Kuntz, 232
 Joana M. Vieira, 256
 Joana Marina Vieira, 259
 João Maria Pereira, 318, 319, 320
 João Marôco, 322
 Joao Paulo Pereira, 318
 João Paulo Pereira, 230, 319, 320
 Johan Hviid Andersen, 159
 Johan Simonsen Abildgaard, 55, 89, 241
 Johanna Heikkilä, 249, 264
 Johanna Rantanen, 82, 244
 Johanna Stengård, 257
 Johanna Sundqvist, 292
 Johannes Siegrist, 2
 John Galvin, 174
 John Hamilton, 145
 John Klein Hesselink, 144
 Johnny Hellgren, 172
 Jonas Hansson, 288
 Jonas Ihlstrom, 104
 Jonathan Houdmont, iii, 49, 50, 51, 142,
 197, 199, 212, 268, 274, 285, 318
 Jonathan Koltai, 343
 Jong Tae Lee, 184
 Joop Kielema, 144
 Jorge Sinval, 322
 Joris Van Ruysseveldt, 169
 Jørn Hetland, 248
 Jos Akkermans, 192
 Jos Brosschot, 77
 Jose María Peiró, 94
 José Ramos, 94
 Josée St-Pierre, 334
 Juan Manuel Vasquez Goñi, 310
 Juana Patlan-Perez, 260, 339
 Judith Godin, 44
 Judith Horrigan, 291
 Judith Semeijn, 240
 Judith Volmer, 130
 Jui-Kuei Chen, 348
 Jukka Piippo, 264
 Jukka Vuori, 66
 Julia Andorfer, 166
 Julia Clasen, 48
 Julia Fernando, 12
 Julia Seelandt, 255
 Julia Vowinkel, 48
 Julie Laurent, 310
 Julie Laurent, Isabelle Bragard, 310
 Julie Menard, 269
 Juliet Hassard, 62, 63, 242, 286
 Julio Rodríguez-Suárez, 350
 Jussi Vahtera, 103, 145
 Kabsoon Kang, 184
 Kaisa Kirves, 96
 Kalevi Korpela, 234
 Karen van Dam, 169
 Karianne Backx, 281
 Karin Villeneuve, 31, 135
 Karina Nielsen, 33, 55, 57, 58, 59, 88, 89,
 241
 Karina Van De Voorde, 53, 55
 Karlheinz Sonntag, 81, 235
 Karolina Doulougeri, 239
 Kasper Edwards, 198
 Kate Dupre, 60
 Katerina Georganta, 239
 Katharina Naswall, 232
 Katharina Näswall, 98, 237, 257
 Katharina Vogt, 67, 68
 Katherine Blackford, 183
 Kathleen Hayden, 22
 Kathleen Landolt, 233, 312
 Kathleen Otto, 47, 57
 Kathrin Wiesner, 335

Kathryn Page, 52, 53, 220, 250
 Katja Kokko, 75, 82
 Katriina Hyvönen, 83, 182
 Katrin Skagert, 164
 Kelly Arbour-Nicitopoulos, 216
 Kelly Basille, 9
 Kelly Calliope Sivris, 306
 Kelly Wilson, 142, 197, 199
 Kelman Luis de la Rosa Zabala, 333
 Ken Addley, 142, 197, 199
 Kenneth Ögren, 292
 Kevin Daniels, 29, 55, 58, 59
 Kevin Kelloway, iv, 107, 135, 312, 330
 Kevin Teoh, 150, 242
 Kim Guest, 37
 Kimberley Breevaart, 225
 Kirsi Ahola, 167
 Klaus-Helmut Schmidt, 165
 Koen W. Crooymans, 119
 Krista Pahkin, 225
 Kristen Jacklin, 291
 Kristin Ten Have, 224
 Kristina Palm, 31
 Kristina Westerberg, 307
 Kuck-Hyun Woo, 184
 Kunhyung Kim, 184
 Kyra J Bobinet, 123
 Lars Ishäll, 246
 Lars Peter Andersen, 159
 Lars-Erik Lauritz, 288
 Laszlo Mangel, 341
 Laura Borgogni, 161, 203
 Laura Diedrich, 186
 Laura Pekkarinen, 249
 Laura Tamosaityte, 315
 Laure Pitfield, 135
 Laurenz L. Meier, 77, 81
 Laurenz Meier, 84
 Lea Pulkkinen, 75, 82
 Leif Boß, 128
 Leif W Rydstedt, 254, 333
 Leire Gartzia, 228
 Lenard Pidgeon, 279
 Lennart Hallsten, 94
 Leon de Beer, 160
 Leonard O'Sullivan, 178
 Leonardo Horacio Noriega-Medina, 321
 Leonore Robieux, 294
 Liang Youxin, 349
 Lieven Eeckelaert, 283
 Ligaya Dalgaard, 328
 Liliana Dias, 195
 Liljaana Lähteenkorva, 234
 Linda Corin, 316
 Linda Magnusson Hanson, 105
 Linda Trinh, 216
 Linn Iren Vestly Bergh, 99, 251
 Lisa Berkman, 179
 Lisa Giallonardo, 156
 Lisa Price, 109
 Lise Løvseth, 302
 Lise T Løvseth, 303
 Lisle Hites, 342
 Liudmila Dementiy, 314
 Liv Gish, 32, 45, 149, 287
 Liv Starheim, 258
 Live Bakke Finne, 243
 Lois Tetrick, iv, 331
 Lorenzo Avanzi, 259
 Loreta Gustainiene, 211, 315
 Lori Francis, 60, 108, 133, 312, 330
 Lorraine Carter, 147, 272, 275
 Lotta Harju, 158
 Louise Grant, 152
 Louise Wallace, 10
 Luc Bourgeois, 251
 Lucas Ford, 141
 Luciano Romeo, 208
 Lucie Kocum, 348
 Luis Manuel Blanco, 117
 Luis Torres, 249
 Lukasz Baka, 185, 299, 308
 Luke Anthony Fiorini, 274
 Lynn Germeys, 195, 202
 Lynne Robinson, 348
 M. Antonia Manassero, 121
 M. Gloria González-Morales, 70, 72
 Macarena Gálvez-Herrer, 116
 Madelon van Hooff, 76
 Magnus Svartengren, 253
 Magnus Sverke, 98, 246
 Maiju Kangas, 264
 Malene Friis Andersen, 222
 Malgorzata Milczarek, 18, 242
 Malin Eklund Wimelius, 288
 Malin Mattson, 172
 Manuel Völkle, 78
 Marc Corbière, 293
 Marc Favaro, 205
 Marc Van Veldhoven, 53, 55
 Marcel Lourel, 344
 Marco Ferrara, 344
 Mareike Adler, 256
 Mareike Hoheluechter, 75
 Maren Kersten, 328
 Margaret C. McKee, 44
 Margaret Hodgins, 40
 Margarethe Hochleitner, 201
 Margherita Bondino, 93
 Margherita Brondino, 208

Margherita Pasini, 93, 208, 327
 Mari Huhtala, 83, 163, 264
 Maria C. W. Peeters, 80
 Maria de Lourdes Preciado Serrano, 310
 Maria Galimzyanova, 205
 Maria Glymour, 179
 Maria João Cunha, 230, 318, 319, 320
 Maria Karanika-Murray, 54
 Maria Kottwitz, 131
 Maria Luisa Farnese, 231
 Maria Nordin, 307
 Maria Peeters, 215
 Maria Rita Greco, 161
 Maria Teresa del Campo Balsa, 333
 Maria Tims, 28, 168
 Mariana Kaiseler, 85, 86, 87, 284
 Marianna Virtanen, 145
 Marianne Parmsund, 253
 Marianne van Woerkom, 27
 Marie Gustafsson Senden, 303
 Marie Gustafsson Sendén, 296
 Marie-Amelie Buffet, 283
 Marie-Esther Paradis, 91
 Mariella Miraglia, 161
 Marija Molan, 189, 302
 Marina A. Boz, 79
 Marina Järvis, 149
 Marina Romeo, 249
 Marinella Paciello, 175
 Marisa Corfiati, 227
 Marisa Matias, 256, 259
 Marisa Salanova, 58, 161, 335, 336
 Marisa Salanova Soria, 341, 346
 Marja-Liisa Kinnunen, 75, 82
 Mark C Cropley, 254
 Mark Cropley, 74, 76, 173, 333
 Mark Liddle, 283
 Mark Zamorski, 35, 37
 Markku Jokisaari, 66
 Marta Herrero, 117, 345
 Marta Llorca-Pellicer, 298, 307
 Martin Bäckström, 159
 Martin Molan, 302
 Martyna Garbaczewska, 275
 Mary Kate Wood, 162
 Mary Sandra Carlotto, 320
 Matea Paškvan, 166, 282
 Mathias Diebig, 143
 Matteo Ronchetti, 226, 227, 351
 Matthew Jenkinson, 177
 Matthias Berking, 124, 125, 128
 Maura Galletta, 326
 Maureen Dollard, 19, 136, 137, 138, 233
 Mbusiro Chacha, 301
 Megan Dove-Steinkamp, 221
 Megan Morgan, 162
 Mehdi Ghazinour, 288, 292
 Merja Sankelo, 249, 264
 Michael Baime, 123
 Michael Ertel, 17
 Michael Falkenstein, 21, 22, 23
 Michael Hogan, 40
 Michael Leiter, 109
 Michael Mustafa, 171
 Michael P. Leiter, 32, 42, 43
 Michel Larivière, 147, 275, 278, 291, 341
 Michel Larivière, 272, 273, 275, 278, 305
 Michel Vézina, 91
 Michela Bonafede, 227
 Michelle Hammond, 121
 Michelle Inness, 347
 Michelle Tucker, 151
 Michelle Tuckey, 137, 233
 Michiel Kompier, 77, 102, 105, 168
 Mi-Hee Park, 184
 Mika Kivimäki, 145
 Mikael Sallinen, 103
 Mikko Harma, 103
 Mikko Nykänen, 66
 Milda Astrauskaite, 157, 276
 Min Hee Cho, 113, 115
 Mirela Turc, 315
 Miriam Rexroth, 73
 Mirjam Godskesen, 271
 Mirjam Radstaak, 77
 Mohammad Al-Hashemi, 193
 Mojgan Mansouri, 270
 Mojgan Padyab, 292
 Monica Albu, 217
 Monica Smith, 339
 Monika Gube, 112
 Monika Tiszberger, 341
 Monique Veld, 55
 Montserrat Yepes-Baldo, 249
 Muel Kaptein, 163
 Nadine Seiferling, 73
 Nadja Formet, 174
 Nancy Lightfoot, 147, 272, 278, 291
 Narjes Sassi, 176
 Natália Vara, 322
 Natasha Scott, 312
 Nathalie Lancot, 298
 Nele De Cuyper, iii, 94, 98, 155, 156
 Nerina Jimmieson, 151, 235
 Nicholas Andreou, 209, 229
 Nick Turner, 213
 Nicky Piper, 25
 Nicola Jacobshagen, 129, 130, 131, 132
 Nicola Payne, 201
 Nicola Reavley, 52

Nicolae Colceriu, 349
 Nicole Wilson, 347
 Nicolene Barkhuizen, 339
 Nikki Bell, 247
 Nikola Hartling, 108, 133
 Nils Myszkowski, 294
 Noora Jalonen, 75
 Noortje Wiezer, 127
 Nora Kopasz, 341
 Norbert K. Semmer, 130, 131, 132, 191,
 242, 255
 Norbert Semmer, 180, 199
 Noreen Tehrani, 23, 24, 25
 Ofelia Tatu, 344
 Ofer Atad, 207
 Ole Carstensen, 328
 Ole Melkevik, 314
 Olena Chapovalov, 275
 Olga Jakob, 21
 Olga van den Akker, 201
 Oliver Hämmig, 252
 Olivier Torres, 334
 Päivi Leino-Arjas, 185
 Pascale M. Le Blanc, 119
 Pascale S. Widmer, 242
 Pasquale Fruscella, 352
 Patricia Murray, 212, 316, 318
 Patrick Horsman, 107
 Patrizia Laurano, 352
 Paul Buckley, 223
 Paul Cushion, 223
 Paul E. Flaxman, 214, 269
 Paul Glavin, 215
 Paul Jiménez, 118, 236
 Paul Madgwick, 285
 Paul Maurice Conway, 209
 Paula M. Matos, 256
 Paula Mena Matos, 259
 Paula Salo, 103, 145
 Pavel Kasyanik, 205
 Pedro Gil-Monte, 321
 Pedro R. Gil-Monte, 280, 298, 307
 Pedro Sousa, 284
 Penelope Richards, 138
 Per Carlbring, 125
 Per Øystein Saksvik, 302
 Pernille Hohnen, 228
 Pernille Uhrskov Hjarsbech, 222
 Pertti Mutanen, 66, 69, 167
 Peta Stapleton, 177, 296
 Peter Chen, 137, 233
 Peter Hasle, 228
 Peter J. Kelly, 16, 223
 Peter Martus, 21, 22
 Peter Spurgeon, 10
 Peter Twohig, 330
 Petra Gaum, 110, 111, 112
 Petra L. Klumb, 78
 Petra Lindfors, 246, 327
 Petter Gustavsson, 254
 Phil Bohle, 103
 Phil Tucker, 103
 Philip Dewe¹, 242
 Philippe Coucke, 310
 Pia Svedberg, 94
 Pierpaolo Ferrante, 227
 Pierre Durand, 197
 Pierre Moulin, 171
 Pierre-Sébastien Fournier, 91
 Piia Tint, 149
 Pim Cuijpers, 127, 128
 Praneet Pensri, 273
 Prawit Janwantanakul, 273
 Prudence Millear, 61, 63, 64, 65, 177, 309
 Qikun Niu, 331
 Rabea Krings, 131
 Rachel Lewis, 13
 Rachel Nayani, 29
 Raghid Al Hajj, 146
 Ramon Rodriguez Montalban, 346
 Ramona Jurcau, 349
 Raquel Rodriguez-Carvajal, 117, 345
 Raymond Randall, 50, 51, 197, 199
 Razvan Pirvan, 349
 Rebecca Brauchli, 32, 47, 66, 67, 68, 196,
 252
 Rebecca Pauly, 324
 Rebecka Forssell, 187
 Reiner Rugulies, 222
 Ren Chang Soo, 190
 Renzo Bianchi, 297, 311
 Rich Neil, 281
 Richard Hicks, 294, 313, 314
 Riku Perhoniemi, 167
 Rita Berger, 249
 Rita Willemsen, 23
 Ritva Luukkonen, 185
 Robert Karasek, ii, 141, 142
 Robert Kerr, 142, 197, 199, 212, 316, 318
 Robert Persson Asplund, 125
 Robert Schinke, 147, 272
 Roberta Fida, 165, 175
 Robin Kowalski, 162
 Rogelio Vicente Gomez Sanchez, 310
 Roger Persson, 222
 Roland Blonk, 192
 Roman Cieslak, 185, 240
 Roman Prem, 166, 282
 Romualdo Ramos, 196
 Ronald Teoh Li Tiah, 181

Rosa Badagliacca, 323
 Rosario Martínez Arias, 261
 Ross Owen Phillips, 190, 191
 Roxane Gervais, 8, 63, 64, 283
 Roy Max Kern, 157, 276
 Roza Bazinska, 299, 308
 Ruth Q Wolever, 123
 Sabine Geurts, 74, 77, 105
 Sabine Sonnentag, 182, 230
 Saija Mauno, 96, 182
 Salla Toppinen-Tanner, 66
 Samantha Penney, 134
 Sami Jantunen, 264
 Sampsa Puttonen, 103
 San Min Lee, 113, 114
 Sandra Dorman, 305
 Sandra Keller, 255
 Sandra Leggetter, 152
 Sandrine Schoenenberger, 171, 172
 Sang Min Lee, 114
 Sanna Malinen, 232
 Sanne Kjær Vandborg, 159
 Sanne Lykke Lundstrøm, 198
 Sannie Vester Thorsen, 222
 Santiago De Ossorno García, 261
 Santiago Gascon, 320
 Santiago Gascón, 230
 Sara De Gieter, 195, 202
 Sara de Rivas, 117
 Sara Göransson, 172, 246
 Sara J. MacLennan, 286
 Sara Leitao, 176, 340
 Sara Luckhaupt, 286
 Sara MacLennan, 188
 Sara Tement, 180
 Sara Viotti, 258, 323, 344
 Sara Vitali, 226
 Sarah Scott, 188
 Sarah Turgut, 235
 Sarah-Geneviève Trépanier, 169
 Sarven McLinton, 138, 233
 Sayeed Khan, 192
 Scott Schieman, 215, 343
 Sean Tucker, 213
 Sebastiaan Rothmann Jr., 160
 Sebastian Fischer, 186
 Sebastian Siegler, 78
 Sébastien Henrard, 291
 Sergio Iavicoli, 15, 16, 19, 226, 227, 351, 352
 Seth van den Bossche, 105
 Shahin Zehra, 301
 Sharon Toker, 170, 207
 Shauna L. Smith, 43
 Sheena Johnson, 14
 Sheila Greatrex-White, 140
 Sheilah Nolan, 220
 Shelby McKinney, 162
 Shin-Ae Kim, 184
 Signe Poulsen, 32, 45, 149, 287
 Sigurborg Oskarsdottir, 100
 Silje Reme, 179
 Silvia A. Silva, 120, 327
 Silvia Gilardi, 258
 Silvia Pignata, 40
 Simon Pek, 213
 Simone Chong, 309
 Simone Grebner, 200
 Simone Liechti, 131
 Simone Russo, 226
 Siobhan Wray, 39, 268
 Siri Hinna, 251
 Sirpa Lusa, 185
 Sofia Dias, 320
 Sofie Tayemans, 195
 Sonia Lupien, 197
 Sônia Regina Pasian, 322
 Sonja Carmichael, 214
 Sonya Stevens, 218
 Soo Sutherland, 147
 Stacey Parker, 235
 Stacy Clemes, 142
 Stanley Friedemann, 214
 Stavroula Leka, iv, 19, 62, 63, 100, 140, 209, 229, 251, 306
 Stefan Diestel, 165
 Stefan Szücs, 345
 Steffen Torp, 304
 Stein Knardahl, 243
 Stephan Hinrichs, 237
 Stephane Guay, 298
 Stéphanie Austin, 169, 332, 334
 Stephanie Gilbert, 312
 Stephanie Nobis, 125, 128
 Stephen Wood, 54
 Steve Harvey, 197
 Subha Ramanathan, 216
 Susana Llorens, 335
 Susana M. Tavares, 119, 122
 Susana Rodrigues, 86, 87
 Susanne Tafvelin, 46, 289, 307
 Suzan Lewis, 201
 Suzanne Bailey, 37
 Suzanne Boyd, 212, 316, 318
 Sven Gross, 84
 Sylvia Boden, 21, 23
 Synøve Hallås, 100
 Tabea Scheel, 166
 Tammy Eger, 305
 Tanja Kirkegaard, 321

Tanja Lischetzke, 276
 Tanja Manser, 211
 Tanya Scarapicchia, 216
 Tarja Hakola, 103
 Tarja Heponiemi, 145
 Taru Feldt, 81, 83, 163, 182, 264
 Teresa Rodrigues, 284
 Teri Lillington, 101
 Terk Chern Gwi, 171
 Terri Shledon, 296
 Tessa Bailey, 138
 the HOUPE study group, 302
 The HOUPE study group, 303
 the NOS-HS study group, 302
 Theo Wehner, 196
 Theodoros Papasavvas, 193
 Thomas Clausen, 58
 Thomas Cox, 188, 263
 Thomas Kraus, 110, 111, 112
 Thomas Rigotti, 47, 57
 Thomas Schettgen, 112
 Tim Vantilborgh, 305
 Timo Sinervo, 249, 264
 Tina Kowalski, 218
 Tinka van Vuuren, 240
 Tinne Vander Elst, 94, 97, 98
 Tiziana Castaldi, 226
 Tom Cox, ii, 3, 62, 63, 242
 Tom Sterud, 238, 246
 Tomas Eriksson, 253
 Toni Alterman, 286
 Tony LaMontagne, 220
 Tony McCarthy, 253
 Tony Winefield, 40
 Toon Taris, 83, 215
 Tore Tynes, 238
 Torkel Bjørnskau, 190
 Torsten Holstad, 47
 Torsten J. Holstad, 57
 Truus Poels, 144
 Tuija Muhonen, 187
 Tunde Edes, 341
 Tuula Oksanen, 145
 Ulla Kinnunen, 96, 234, 244
 Ulrica von Thiele Schwarz, 30, 31, 46, 91
 Ulrich Stoetzer, 253
 Uwe Rose, 21, 22
 Valentina Trotta, 344
 Valeria Bocconi, 352
 Veerle Brenninkmeijer, 192, 194
 Vera JC Mc Carthy, 163, 280
 Verena C. Hahn, 231
 Verena Hahn, 214
 Vibeke Andersen, 271
 Vicente Ponsoda, 349
 Vicki J. Magley, 42, 43
 Victor Catano, iii, 147
 Victor Haines, 197
 Victoria Bennett, 247
 Victoria Blom, 94
 Victoria Hogan, 40
 Viktoria Arling, 324
 Wilhelm Borg, 222
 Vincent Grosjean, 174
 Vincent Rousseau, 197
 Virginie Althaus, 174
 Vivian Schult, 170
 Wendy Carroll, 60
 Wendy Niesen, 97
 Wendy Nilsen, 154, 194, 314
 Wido G.M. Oerlemans, 27
 Wilfred Agbenyikey, 141, 142
 Willem van Mechelen, 127
 Willem Van Mechelen, 224
 William Reisel, 93
 Wilmar Schaufeli, 83, 158, 192, 204
 Wolfgang K. Kallus, 118
 Wolfgang Kälin, 180, 199
 Wulf Rössler, 186
 Yannick Griep, 97
 Yasmin Handaja, 195
 Yasumasa Otsuka, 300
 Yiqiong Li, 233
 Yolanda Estreder, 94
 Zachary McGillis, 305
 Zhaoli Song, 214
 Zinta Podniece, 283
 Zsuzsanna Kerekes, 275, 341

The European Academy of Occupational Health Psychology is the European representative body for the discipline. The Academy is a registered charity under English law (registered charity number 1115640) that exists to support research, education, and professional practice across Europe. This is achieved through its biennial conference, academic and practitioner-oriented publications, and the provision of small grants to individuals and groups

ISBN 978-0-9928786-0-3



9 780992 878603 >