



Public Health
England



LEEDS
BECKETT
UNIVERSITY

Protecting and improving the nation's health

Interventions to prevent burnout in high risk individuals: evidence review

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health..

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

Core content prepared by Dr Anne-Marie Bagnall, Rebecca Jones, Humaira Akter and Dr James Woodall at The Centre for Health Promotion Research, Leeds Beckett University.

For queries relating to this document, contact michael.brannan@phe.gov.uk

© Crown copyright 2016

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGP](http://www.nationalarchives.gov.uk/ogp/) or email psi@nationalarchives.gsi.gov.uk. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published February 2016

PHE publications gateway number: 2015709

Contents

About Public Health England	2
Executive summary	4
1 Introduction - What is burnout and why is it important?	6
2 Methodology	9
3 Discussion: key findings	12
4 Conclusions	16
5 References	18
6 Appendices	22
Appendix A: Flowchart of study selection process	22
Appendix A: Results	23

Executive summary

Although there is existing evidence on what works to treat burnout and work-related stress, there is less on what works to prevent it from occurring in the first place. This report provides an overview of the literature on how to prevent burnout and work-related stress in individuals and within organisations.

Burnout is defined by the International Statistical Classification of Diseases and Related Health Problems as a “state of vital exhaustion” (Z73.0) under the category of “problems related to life-management difficulty” (Z73.0). Burnout is a prolonged response to long-term emotional and interpersonal stressors on the job. The key dimensions of this response are overwhelming exhaustion, feelings of cynicism and detachment from the job, a sense of ineffectiveness and a lack of accomplishment.

Burnout is related to workload and time pressure, role conflict and role ambiguity, lack of social support, lack of feedback, lack of autonomy and lack of participation in decision-making. Burnout has been associated with absenteeism, intention to leave the job and staff turnover. Among those who remain in the job, burnout leads to lower productivity and effectiveness at work, decreased job satisfaction and a reduced commitment to the job or organisation. Burnout is associated with adverse health outcomes associated with stress, such as depression, musculoskeletal pain, type 2 diabetes, cardiovascular disease and premature mortality.

Alongside burnout, another commonly used measure is work-related stress. Work-related stress is defined as a harmful reaction to undue pressures and demands placed on employees at work.

Understanding how burnout and work-related stress can be prevented and treated in workplaces is of great importance both from a public health perspective and for businesses aiming to reduce absenteeism and increase productivity.

Summary of methodology

This evidence review is one of four commissioned by Public Health England exploring certain priority – but generally under-explored – issues around health, work and unemployment. The target audience is a combination of local government, national organisations interested in health and work, and businesses themselves. The content of this report was developed by The

Centre for Health Promotion Research using a search of relevant published and grey literature.

Limitations

Much of the literature on burnout is within health care organisations and large-scale organisations. There is a gap in the evidence of interventions that work in small or medium size organisations and across other sectors. Workplaces are diverse; therefore simply replicating interventions effective in one workplace to another may not be effective or appropriate. While areas for action and future research are identified in this evidence review, transferring interventions between contexts should be done with caution.

There is no valid differential diagnostic instrument of burnout and it is used interchangeably in this evidence review with work-related stress due to the overlaps between the two. Therefore, the conclusions of this evidence review refer to both burnout (as defined within this evidence review) and work-related stress.

Key findings

Interventions designed to reduce symptoms and impact on burnout and work-related stress were conducted more often at an individual or small-group level than at an organisational level. Individual level interventions that can reduce burnout include staff training, workshops and cognitive-behavioural programmes.

Changing aspects of the organisation's culture and working practices might be considered alongside individual level interventions to more effectively prevent burnout. Changes to workload or working practices appear to reduce stressors and factors that can lead to burnout. There is some evidence to suggest that organisational interventions produce longer-lasting effects than individual approaches.

This evidence review supports the wider literature which argues that organisational interventions in the workplace may be more effective than individual interventions alone. This might involve combining proactive preventative approaches focused at the organisational environment and secondary management approaches directed at individuals. Combining individual and organisational level approaches includes a system change that adopts a participatory environment, promotes open communication, manager and peer support, a culture of learning and successful participation of employees in planning and implementation of programmes.

1 Introduction

1.1 Rationale for this evidence review

Workplace health and worklessness are a corporate priority for Public Health England (PHE), as employment is a wider determinant of health. PHE is interested in how work-associated interventions can support the local delivery of outcomes across the public health outcomes framework www.phoutcomes.info

Burnout prevention has been raised as an issue through PHE's engagement with businesses in both the private and public sector. Specifically, what interventions work with individuals who are considered at high risk of burnout. There is some evidence of interventions for individuals who already have clinically established burnout. However, less is understood about interventions line managers could use in the pre-burnout phase.

The Centre for Health Promotion Research (CHPR) was therefore commissioned to undertake a rapid evidence review of interventions to prevent burnout.

1.2 What is burnout?

Burnout is defined by the International Statistical Classification of Diseases and Related Health Problems as a "state of vital exhaustion" (Z73.0) under the category of "problems related to life-management difficulty" (Z73.0).¹ Burnout is a prolonged response to long-term emotional and interpersonal stressors on the job.² The key dimensions of this response are overwhelming exhaustion, feelings of cynicism and detachment from the job, a sense of ineffectiveness and a lack of accomplishment.³ However, a recent systematic review of differential diagnosis of the burnout syndrome⁴⁻⁵ concluded that currently there is no valid differential diagnostic instrument for burnout.

Burnout has been associated with absenteeism, intention to leave the job and staff turnover. Among those who remain in the job, burnout leads to lower productivity and effectiveness at work, decreased job satisfaction and a reduced commitment to the job or organisation. Burnout is associated with adverse health outcomes associated with stress, such as depression, musculoskeletal pain, type 2 diabetes, cardiovascular disease and premature mortality.²

1.3 What causes burnout?

Burnout is strongly related to workload and time pressure, role conflict and role ambiguity, lack of social support, lack of feedback, lack of autonomy and lack of participation in decision-making; according to research.² Various occupational, organisational and personal characteristics are associated with burnout. For example, the level of burnout is reported to be higher among younger employees than older employees.² It has been argued that low levels of resilience, poor self-esteem, an external locus of control and an avoidant coping style are associated with elevated stress levels⁶ and burnout.² There is a body of literature on personal and organisational factors associated with work-related stress and with burnout that was identified but is not part of this evidence review.

1.4 Work-related stress and wellbeing

Work-related stress is defined as a harmful reaction to undue pressures and demands placed on employees at work.⁷ Estimates from the Labour Force Survey in 2013-14 suggest that the total number of cases of work-related stress, depression or anxiety accounts for 39% of all cases of work-related illnesses,⁸ where work-related illness relates to conditions which people think have been caused, or made worse, by work (regardless of whether they have been seen by doctors). Occupations with the highest reported rates of work-related stress were health professionals (in particular nurses), teaching and education professionals and caring personal services (in particular welfare and housing associate professionals). According to survey respondents, the main work activities reported to cause or exacerbate work-related stress were work pressure, lack of managerial support and work-related violence and bullying.

The interaction between environmental stress factors and individual factors affects the wellbeing of people at work. Wellbeing at work is defined as individuals' ability to work productively and creatively, to engage in strong and positive relationships, fulfilment of personal and social goals, contribution to community, and a sense of purpose.⁹

1.5 Interventions to prevent or treat burnout and work-related stress

Because of the similarities between work-related stress and burnout, the lack of a valid differential diagnosis for burnout and the inconsistent use of the term burnout, evidence on both burnout and work-related stress is included in this evidence review. However, the evidence that specifically relates to burnout is highlighted.

Most discussions of burnout interventions focus on individual-centred solutions. These may help individuals alleviate exhaustion, but research suggests they are likely to be relatively ineffective if the workplace allows these employees much less control over stressors than in other domains of their lives. Research has found that situational and organisational factors play a bigger role in burnout and work-related stress than individual factors.²

Both the Marmot Review¹⁰ and the National Institute for Health and Care Excellence¹¹ recommend a strategic and coordinated approach to preventing burnout. They highlight various situational and organisational factors that play a larger role in preventing burnout than individual level factors:

- job autonomy
- job security
- staff engagement
- culture of participation, equality and fairness
- opportunities for promoting employees' mental wellbeing
- opportunities for flexible working
- strengthened role of line managers¹¹⁻¹²

This evidence review explores how individual and workplace interventions can prevent burnout and work-related stress.

2 Methodology

This evidence review is one of four commissioned by PHE exploring certain priority – but generally under-explored – issues around health, work and unemployment. The target audience is a combination of local government, national organisations interested in health and work, and businesses themselves.

The core content of this report was developed by CHPR, Leeds Beckett University.

The content was prepared by using a standard review methodology where possible,¹³ but given the short timescale, there was a focus on existing reviews and large projects.¹² The search focused on research published in academic journals and other reports. The search aimed to find research on adults in small, medium and large workplaces.

2.1 Aims

1. To review the evidence base relating to interventions designed to reduce symptoms and impact of burnout and reduce burnout risk.
2. To make implications for practice on how this evidence could be extrapolated to general workplace settings.

2.2 Search strategy

The search focused on readily available research published in English in both UK and international journals. Six electronic databases were searched for studies published in English between January 1994 and February 2014: MEDLINE; CINAHL Plus; PsycINFO; The Cochrane Database of Systematic Reviews; CENTRAL; DARE. Websites of relevant organisations (Kings Fund, Mind, NICE, PHE, Department of Work and Pensions, Health and Safety Executive, Royal College of Physicians, British Psychological Society) were searched for grey literature. A citation search was also undertaken of relevant studies that were included in the 2010 CHPR Evidence Review on Mental Health and Employment, and reference lists of key papers were scanned.

Key search terms within the study were agreed within the internal team with approval from PHE. These terms built on the search strategy used in a previous CHPR review on mental health and employment, and included:

- workplace OR employee* OR employer* OR workforce OR business or occupation
- burnout OR mental health OR wellbeing OR psychological health OR stress
- intervention* OR promot* OR model* OR strateg* OR program* OR evaluation OR evidence OR initiative OR systematic review OR evidence review OR evidence synthesis

2.3 Inclusion/exclusion criteria

2.3.1 Inclusion criteria

- population/setting: adults in workplaces. Evidence was summarised separately for large and small-medium workplaces, as it was thought likely that different interventions would be effective in each. Evidence was assessed for its relevance to the UK setting.
- intervention: interventions designed to reduce symptoms and impact of burnout and reduce burnout risk. We expected to look at three separate but potentially overlapping categories on intervention. Those designed to:
 - I. reduce burnout risk in the workplace (workplace level interventions)
 - II. identify individuals at high risk of burnout and/ or prevent burnout from developing in individuals showing symptoms (individual or group level interventions)
 - III. treat burnout and return individuals to the workplace (individual level interventions)
- comparison: control groups where appropriate.
- outcomes: all studies that report outcomes relating to reduced symptoms of burnout, including exhaustion, cynicism, and inefficacy. Other relevant outcomes such as sickness absence were included where reported.
- study designs: all empirical study designs, including systematic reviews, were eligible for inclusion. However, as a first stage only evidence from systematic reviews and evidence syntheses was included, and then evidence from other study designs was used to fill in evidence gaps.

2.3.2 Exclusion criteria

- post-traumatic stress disorder/critical incident stress management/debriefing
- students
- general health promotion interventions, unless specifically relating to work-related stress
- studies on acceptability of or take-up of interventions, but not intervention effects
- not enough information about the intervention
- fake feedback
- grief counselling
- outcomes were biological tests only

Lists of studies excluded for the reasons above are available from the authors on request.

2.4 Evidence synthesis

All study designs were included, but as a first stage, only evidence from systematic reviews and evidence syntheses was included. Evidence from other study designs was then used to fill in evidence gaps. Detailed validity assessments were not possible due to time constraints, but notes were made on the study designs and the overall risk of bias for each included study. Prominence was given to evidence from good quality systematic reviews. See appendix A for a flowchart of the study selection process.

Studies were grouped according to key themes based on the size of the organisation (small/medium/large), by intervention type (eg, organisational level versus individual or group level) and by outcomes (burnout and related outcomes such as stress) to produce a thematic summary. Prominence was given to evidence from good quality systematic reviews. See appendix B for a detailed review of the search results.

3 Discussion: key findings

The workplace is a major stressor in modern life. While short episodes of stress can be useful for some people in terms of motivation, long-term stress in the workplace can be harmful to an individual's health and wellbeing and can lead to burnout.¹⁴ Burnout is commonly defined as a "work-related mental health impairment comprising three dimensions: emotional exhaustion, depersonalisation and reduced personal accomplishment".¹⁵ Work-related stress is defined as a harmful reaction to undue pressures and demands placed on employees at work.⁷

A literature review was conducted to explore existing workplace interventions aimed at preventing and reducing the impact of burnout and stress. The results of the literature searches are described in appendix A and the main findings are discussed below.

3.1 Individual and small-group level interventions

Interventions designed to reduce symptoms; impact and risk of burnout and work-related stress were found to operate more frequently at an individual or small-group level rather than at an organisational or structural level. There was moderate evidence that individually directed approaches can reduce burnout and work-related stress.

One of the most rigorous reviews¹⁶ of randomised control trials of workplace interventions to reduce stress showed small but positive outcomes of person-directed programmes. For example, there is reasonable evidence that staff training and workshops can be effective for preventing symptoms of burnout. These might include stress awareness courses with a focus on coping. Evidence suggests that where these interventions are underpinned by a philosophy of employee participation and where employees feel that the environment is safe and non-threatening; there is a greater likelihood of successful outcomes.

Another individual level intervention, cognitive-behavioural therapy, showed positive (but modest) effects and were observed to produce greater effects than other types of workplace intervention, such as relaxation and meditation techniques. Mindfulness based interventions (a form of meditation that places great emphasis on conscious awareness of the here and now) cited in one systematic review¹⁷ were found to be effective for reducing negative psychological effects of the working environment. However, there was little evidence to suggest that this intervention was any more effective than other stress management approaches such as relaxation and yoga.

Overall there is only moderate evidence that individually oriented interventions produce positive results in relation to burnout and stress prevention in workplaces.

Due to space constraints a table of included systematic reviews has not been included within this report. If you would like this information you can get in touch with the authors. Case studies have been provided from the systematic reviews to demonstrate the nature of individual-level and organisational-level interventions.

Case study 1. Individual level intervention – “Worksite Stress Management Program Using Two Mind-body Stress Reduction Interventions”¹⁸

Wolever et al. (2013) conducted a randomised control trial to ascertain the viability for two mind-body workplace stress reduction programs – one therapeutic yoga-based and the other mindfulness-based. A further objective was to evaluate the mode of delivering the mindfulness-based intervention and to understand whether an online or ‘in-person’ delivery influenced outcomes.

Employee volunteers were randomised into a therapeutic yoga worksite stress reduction program, one of two mindfulness-based programmes, or a control group that participated only in assessment. Compared with the control group, the mind-body interventions showed significantly greater **improvements on perceived levels of stress and sleep quality**. There was no effect of the mode in which mindfulness-based training was delivered; in-person and online interventions were found to have equivalent effectiveness, although the study retention was found to be improved in the online group.

3.2 Organisational level interventions

There were fewer intervention studies identified that had an organisational focus. However, one review¹⁵ suggested that organisationally focused interventions produced longer-lasting positive effects than those individually oriented. While further empirical work is required to validate this, it suggests that modifications to aspects of the organisation’s culture and working practices should be considered in addition to those delivered at the individual level to create stronger effects in relation to burnout prevention. Alterations to workload or changes to working practices were demonstrated to reduce stressors and factors that can lead to burnout. Where managerial involvement and support for these interventions were found there was a greater likelihood of positive effects.

Case study 2. Organisation level intervention – “Organisational Intervention to Reduce Occupational Stress and Turnover in Hospital Nurses”¹⁹

Two Northern Territory (NT) hospitals in Australia took part in an organisational intervention between 2005-2010 following an enterprise agreement in the NT Department of Health with the aim of reducing occupational stress and high turnover rate in nursing staff.

The organisational level intervention took a workload focus and targeted the following key areas:

- the review, analysis and implementation of a nursing workload tool
- assessment of nursing workloads in all wards and units of NT hospitals
- additional nursing positions to meet short fall and a long term recruitment strategy: expansion of the nursing graduate programme with increased clinical supervision and support, establishment of a graduate school for health practice, a recruitment campaign for new graduates and continuing employees

Rickard et al (2012) evaluated the intervention in both hospitals using a pre and post study design. A survey was sent to all registered nurses and midwives. The questionnaire was developed to measure outcomes in psychological health, work outcomes, job demands, job resources and system capacity (adaptability and communication). The post-test survey at one year also included questions regarding changes in the last 12 months. Archival information was used for turnover rates.

Results of the evaluation showed a **significant reduction in adverse psychological health** such as psychological distress and emotional exhaustion. Improvements were also seen in **individual job satisfaction**, with improvements in system capacity, a reduction in job demands and an increase in resources. Nursing **staff turnover** also reduced in the second hospital.

3.3 Methodological quality

Most studies on individual interventions concluded that the heterogeneity of interventions and methodological limitations in the study design creates uncertainty in the effectiveness of these approaches. The methodological quality of studies on organisational level factors was reported to be too weak to make any conclusive

claims. Therefore, there are limitations on the strength of implications for practice that can be made in this field.

3.4 Transferability of findings

This evidence review suggests that conceptualising the workplace as a homogenous setting is unhelpful and workplaces are diverse in terms of their function, size and culture. No two settings are alike and we should be conscious of the diversity between, what may appear to be, homogenous workplaces. For example, the organisational structure of one NHS Trust may be different to another.²⁰ Simply replicating effective interventions may not be effective or appropriate and the generalisability of research findings must be questioned. Transferability of interventions from one workplace to another must be considered with caution. A basic understanding and reflection of the needs and circumstances of a workplace environment, including its staff and how it relates to existing research is crucial.

The vast majority of identified studies are based within health care settings. Although research in other settings was found, caution should be exercised before translating the findings of this evidence review to workplace settings beyond health care.

In the majority of included studies, it was commonplace for the focus of the intervention to be on large-scale organisations with fewer, if any, examples of interventions in small or medium-sized working environments. Small and medium enterprises (SMEs) accounted for 99.9% of all private sector businesses in the UK, and 59.3% of private sector employment,²¹ therefore further empirical work is needed in small to medium sized workplaces.

Nevertheless, the majority of studies included in this evidence review may be applicable to UK workplaces as most of the studies reviewed were either directly from the UK or from other developed countries, such as Canada and the US.

4 Conclusions

4.1 Burnout and work-related stress

Understanding how burnout and work-related stress can be prevented and treated in workplaces is of great importance both from a public health perspective and for businesses aiming to reduce absenteeism and increase productivity. This evidence review sought to synthesise the current evidence on interventions designed to reduce symptoms and impact of burnout and work-related stress and to prevent burnout and work-related stress risk.

4.2 Individual/small group and organisational interventions

Interventions to prevent burnout and work-related stress are more frequent at the individual and small group level compared to the organisational level. Moderate evidence exists for individual approaches such as workshops, cognitive behavioural training and stress management.

Changing aspects of the organisation's culture and working practices might be considered alongside individual level interventions to more effectively prevent burnout. Changes to workload or working practices appear to reduce stressors and factors that can lead to burnout. Some evidence suggests that organisational interventions produce longer-lasting effects than individual approaches.¹⁵

Findings from this evidence review have brought to light the differences in individual and organisational based interventions. Despite these differences interventions have consistently yielded positive results and significant reductions in workplace burnout and stress. Due to their longer-lasting effects, organisational interventions in the workplace may be more effective than individual interventions alone. In order to maximise intervention effectiveness research may benefit from combining both organisation- and person-directed elements. This might involve combining proactive preventative approaches focused at the organisational environment and secondary management approaches directed at individuals.²² Combining individual and organisational level approaches includes a system change that adopts a participatory environment, promotes open communication, manager and peer support, a culture of learning and successful participation of employees in planning and implementation of programmes.

4.3 Opportunities for future research

Although previous literature has explored interventions targeting workplace burnout and stress-reduction, a gap in the literature still persists where further work is still needed. There is a need for better evidence on interventions set in SMEs and organisations other than healthcare; more research on the effectiveness of organisational interventions on burnout and work-related stress; more research on initial burnout and work-related stress prevention; and development of a valid differential diagnostic instrument of burnout. Additionally, taking on board the differences between how workforces may operate globally, there is greater need for UK-based interventions in order to increase the applicability and generalisability of methodologies and findings.

This evidence review has provided a summary of the current limited evidence on individual and organisation level interventions to prevent burnout and work-related stress. While research is at the early stages and more research is needed, various interventions have been identified to promote a healthy working environment for all employees.

5 References

- ¹ WHO. International statistical classification of diseases and related health problems - 10th revision. Geneva: WHO, 2010.
- ² Maslach C, Schaufeli W, Leiter M. Job burnout. *Annu Rev Psychol.* 2001;52:397-422.
- ³ Maslach C, Jackson SE. The measurement of experienced burnout. *J Occup Behav.* 1981;2:99-113.
- ⁴ Kaschka W, Korczac D, Broich K. *Dtsch Arztebl Int.* 2011;108(46):781-7.
- ⁵ Korczac D, Huber B, Kister C. Differential diagnostic of the burnout syndrome. *GMS Health Technol Assess.* 2010; 6.
- ⁶ Semmer N. Individual differences, work stress and health. In: Schabracq M, Winnubst J, Cooper C, editors. *Handbook of Work and Health Psychology.* Chichester, UK: Wiley; 1996.
- ⁷ Health & Safety Executive. Work related stress. Health & Safety Executive; 2013 [cited 2014 April 21]; Available from: <http://www.hse.gov.uk/stress/furtheradvice/whatisstress.htm>.
- ⁸ Health & Safety Executive. Stress-related and psychological disorders in Great Britain 2014. 2014 [cited 2014 April 21]; Available from: <http://www.hse.gov.uk/statistics/causdis/stress/stress.pdf>
- ⁹ Dewe P, Kompier M. Foresight Mental Capital and Wellbeing Project. Wellbeing and work: Future challenges. London: The Government Office for Science, 2008.
- ¹⁰ Marmot M. Fair society, healthy lives. The Marmot review. Strategic review of health inequalities in England post-2010. London: The Marmot Review, 2010 0956487009.
- ¹¹ National Institute for Clinical Excellence. Workplace Interventions that are effective for promoting mental wellbeing. Synopsis of the effectiveness and cost effectiveness. London: NICE, 2006.
- ¹² Robinson M, Raine G. Mental Health and Employment: Evidence Summary. Leeds: Centre for Health Promotion Research, Leeds Metropolitan University, 2010.
- ¹³ Centre for Reviews Dissemination. Systematic Reviews: CRD's guidance for undertaking reviews in health care. York: University of York, 2009.
- ¹⁴ Hubley J, Copeman J, Woodall J. Practical health promotion. Cambridge: Polity Press, 2013.

- ¹⁵ Awa WL, Plaumann M, Walter U. Burnout prevention: a review of intervention programs. *Patient Educ Couns.* 2010;78(2):184-90.
- ¹⁶ Marine A, Ruotsalainen J, Serra C, Verbeek J. Preventing occupational stress in healthcare workers. *Cochrane Database Syst Rev.* 2006(4):CD002892.
- ¹⁷ Virgili M. Mindfulness-based interventions reduce psychological distress in working adults: A meta-analysis of intervention studies. *Mindfulness.* 2015;6(2): 326-337.
- ¹⁸ Wolever R, Bobinet K, McCabe K, MacKenzie L, Fekete E, Kusnick C, et al. Effective and viable mind-body stress reduction in the workplace: two RCTs. *BMC Complement Altern Med.* 2012;12(Suppl 1):P87.
- ¹⁹ Rickard G, Lenthall S, Dollard M, Opie T, Knight S, Dunn S, et al. Organisational intervention to reduce occupational stress and turnover in hospital nurses in the Northern Territory, Australia. *Collegian (Royal College of Nursing, Australia).* 2012;19(4):211-21.
- ²⁰ Poland B, Krupa G, McCall D. Settings for health promotion: an analytic framework to guide intervention design and implementation. *Health Promot Pract.* 2009;10:505-16.
- ²¹ White S. Business Population Estimates 2013. Sheffield: Department for Business, Innovation & Skills; 2013 [cited 2014 21st April]; Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/254552/13-92-business-population-estimates-2013-stats-release-4.pdf.
- ²² Edwards D, Hannigan B, Fothergill A, Burnard P. Stress management for mental health professionals: a review of effective techniques (Provisional abstract). *Stress and Health [Internet].* 2002; (5):[203-15 pp.]. Available from: <http://onlinelibrary.wiley.com/o/cochrane/cldare/articles/DARE-12003006013/frame.html>.
- ²³ Bhui KS, Dinos S, Stansfeld SA, White PD. A synthesis of the evidence for managing stress at work: a review of the reviews reporting on anxiety, depression, and absenteeism. *J Environ Public Health.* 2012;2012:515874.
- ²⁴ Corbière M, Shen J, Rouleau M, Dewa CS. A systematic review of preventive interventions regarding mental health issues in organizations. *Work.* 2009;33(1):81-116.
- ²⁵ Czabala C, Charzynska K, Mroziak B. Psychosocial interventions in workplace mental health promotion: an overview. *Health Promot Int.* 2011;26 Suppl 1:i70-84.
- ²⁶ David AR, Szamoskozi S. A meta-analytical study on the effects of cognitive behavioral techniques for reducing distress in organizations (Provisional abstract). *Journal of Cognitive and Behavioral Psychotherapies*

[Internet]. 2011; (2):[221-36 pp.]. Available from:
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005601.pub2/abstract>

²⁷ Giga S, Noblet A, Faragher B, Cooper C. The UK Perspective: A review of research on organisational stress management interventions. *Aust Psychol.* 2003;38(2):156-64.

²⁸ Gilbody S, Cahill J, Barkham M, Richards D, Bee P, Glanville J. Can we improve the morale of staff working in psychiatric units? A systematic review. *J Ment Health.* 2006;15(1):7-17.

²⁹ Hamberg-van Reenen HH, Proper KI, van den Berg, M. Worksite mental health interventions: a systematic review of economic evaluations. *Occup Environ Med.* 2012;69(11):837-45.

³⁰ Health and Safety Executive. Beacons of excellence in stress prevention. 2003 Contract No.: Research Report 133.

³¹ Lamontagne AD, Keegel T, Louie AM, Ostry A, Landsbergis PA. A systematic review of the job-stress intervention evaluation literature, 1990-2005. *Int J Occup Environ Med.* 2007;13(3):268-80.

³² Mimura C, Griffiths P. The effectiveness of current approaches to workplace stress management in the nursing profession: an evidence based literature review. *Occup Environ Med.* 2003;60(1):10-5.

³³ Murphy LR. Stress management in work settings: a critical review of the health effects. *Am J Health Promot.* 1996;11(2):112-35.

³⁴ Murta SG, Sanderson K, Oldenburg B. Process evaluation in occupational stress management programs: a systematic review. *Am J Health Promot.* 2007;21(4):248-54.

³⁵ Paris Jr M, Hoge MA. Burnout in the mental health workforce: a review. *J Behav Health Serv Res.* 2010;37(4):519-28.

³⁶ Peñalba V, McGuire H, Leite Jose R. Psychosocial interventions for prevention of psychological disorders in law enforcement officers. *Cochrane Database of Systematic Reviews* [Internet]. 2008; (3). Available from:
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005601.pub2/abstract>

³⁷ Richardson KM, Rothstein HR. Effects of occupational stress management intervention programs: a meta-analysis. *J Occup Health Psychol.* 2008;13(1):69-93.

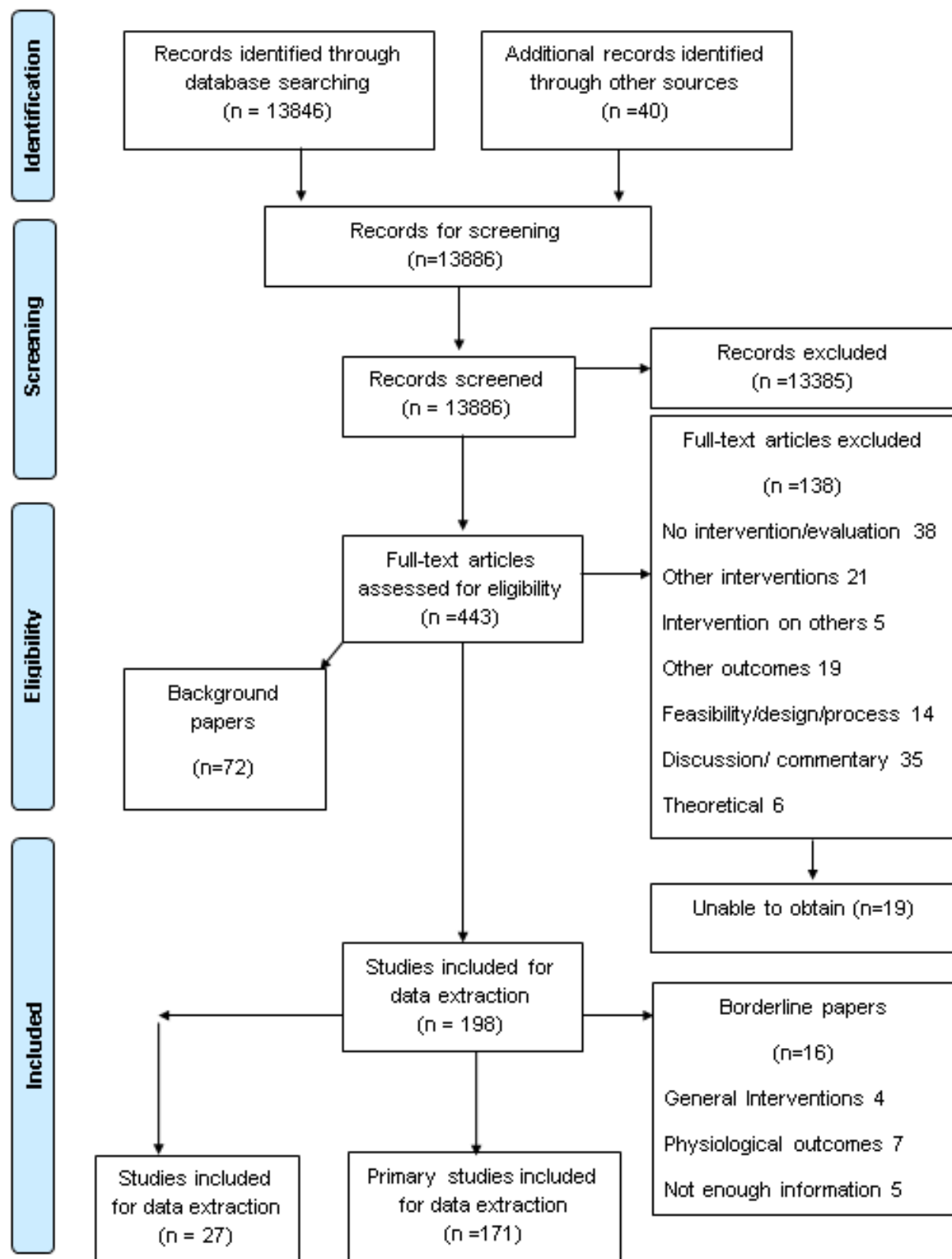
³⁸ Ruotsalainen J, Serra C, Marine A, Verbeek J. Systematic review of interventions for reducing occupational stress in health care workers. *Scand J Work Environ Health.* 2008;34(3):169-78.

³⁹ Sims J. The evaluation of stress management strategies in general practice: an evidence-led approach. *Br J Gen Pract.* 1997;47(422):577-82.

- ⁴⁰ van der Hek H, Plomp HN. Occupational stress management programmes: a practical overview of published effect studies. *Occup Med (Lond)*. 1997;47(3):133-41.
- ⁴¹ van der Klink JJ, Blonk RW, Schene AH, van Dijk FJ. The benefits of interventions for work-related stress. *Am J Public Health*. 2001;91(2):270-6.
- ⁴² van Wyk BE, Pillay-Van Wyk V. Preventive staff-support interventions for health workers. *Cochrane Database Syst Rev*. 2010(3):CD003541.
- ⁴³ Westermann C, Kozak A, Harling M, Nienhaus A. Burnout intervention studies for inpatient elderly care nursing staff: Systematic literature review. *Int J Nurs Stud*. 2014;51(1):63-71.
- ⁴⁴ Seymour L, Grove B. Workplace interventions for people with common mental health problems. London: 2005.
- ⁴⁵ Rick J, Thomson L, Briner RB, O'Regan S, Daniels K. Review of existing supporting scientific knowledge to underpin standards of good practice for key work-related stressors- Phase 1. 2002.
- ⁴⁶ Blaug R, Kenyon A, Lekhi R. Stress at work: a report prepared for The Work Foundation's principal partners. Project Report. London: The Work Foundation, 2007.
- ⁴⁷ Kuoppala J, Lamminpaa A, Husman P. Work health promotion, job well-being, and sickness absences--a systematic review and meta-analysis. *J Occup Environ Med*. 2008;50(11):1216-27.
- ⁴⁸ Hill D, Lucy D, Tyers C, James L. What works at work?: Review of evidence assessing the effectiveness of workplace interventions to prevent and manage common health problems. Leeds: Health Work and Wellbeing Executive, 2007.
- ⁴⁹ Dickson K, Gough D. Supporting people in accessing meaningful work: Recovery approaches in community based adult mental health services. London: SCIE 2008 Contract No.: 21.

6 Appendices

Appendix A. Flowchart of study selection process



Appendix B. Results

How much evidence is there?

The searches of electronic databases and websites found 13,886 titles and abstracts (including duplicates), with 443 retrieved in full for screening against the inclusion criteria. One hundred and thirty-eight studies 138 were excluded at this stage.

One hundred and ninety-five studies met the inclusion criteria for this evidence review: 27 systematic reviews (published in 29 papers, as two were published twice)^{11, 15-17, 22-45} and 168 primary studies (published in 171 papers). A list of primary studies and excluded studies is available from the review authors on request.

Type and target of interventions

The interventions were grouped into two dimensions: type and target.

The type of intervention shows whether the intervention is:

1. Primary – preventative
2. Secondary – focused on at-risk groups
3. Tertiary – recovery focused
4. Combinations of these³³

The *target* of an intervention can be: individuals, groups, organisations or a combination. Combination targets can include the ‘interface’ of organisations with workers (such as mechanisms for employee participation, or co-worker support groups), organisational targets (such as job redesign, or workload reduction), individual targets (such as coping skills training, or employee assistance), and combined organisational and individual interventions.³¹

Beyond the two dimensions of type and target, interventions can be integrated across both dimensions. Integrated interventions combine aspects of primary, secondary or tertiary interventions with ‘feedback’ loops, highlight participation of targeted groups and context-sensitivity.

Description of primary studies

Fifteen primary studies were from the UK. Of the 168 primary studies that met the inclusion criteria, the largest proportion (39%) involved training and education programmes. Also popular were individual-centred interventions (23%), cognitive behavioural therapy (18%), workplace strategy/policy (16%), mindfulness (15%) and discussion or support groups (15%).

Description of systematic reviews

27 systematic reviews^{11,15-17, 22-45} met the inclusion criteria. Of these, 12 included studies that addressed burnout^{11, 15-16, 22-23, 25, 27, 32, 35-36, 42-43} and 15 were focused on more general work-related stress.^{17, 24, 26, 28-31, 33-34, 37, 39-41, 44-45}

The majority of the reviews were on large organisation (n>250)^{16-17, 28-29, 32-33, 36-37, 39, 43} or unspecified size.^{11, 15, 22-27, 30, 34-35, 41-42, 44-45}

There were two primary intervention targets across the 27 reviews, mostly organisation level and individual level interventions, with a range of other targets. There was a wide range of intervention types.

Individual or group level interventions included: cognitive-behavioural therapy (CBT),^{15, 24, 26-27, 30, 32-33, 35, 37, 39-41, 44} mindfulness,¹⁷ psychosocial intervention training,²⁴ psychotherapy,¹⁵ counselling,^{15,36} adaptive skill training,¹⁵ social support,^{15,24} relaxation exercises,^{15, 30, 32-33, 37, 39-40} recreational music making,^{15, 29, 32} coping strategies,^{24,44} psychoeducation on stress and mental health,^{24,36} rational-emotive behaviour therapy (REBT),²⁶ meditation^{30, 33, 37, 40}, biofeedback,^{30, 33, 40} exercise,^{30, 36} time-management,³⁰ stress management,^{16, 34, 36, -37, 40, 42, 44} social support education,³² "burnout intervention programme",³⁵ mental imaging at home,³⁶ social skills.^{36, 44}

Organisational level interventions included: work process restructuring,¹⁵ work performance appraisals,¹⁵ work shift readjustments,¹⁵ job evaluation,¹⁵ participatory organisational intervention,^{24, 27, 30} job control,²⁴ staff development training workshops,^{22, 30} employee assistance programmes,^{27, 30, 40} co-worker support,^{27, 30} job design and restructuring, enhanced care,²⁹ critical incident stress management programme,²⁹ selection and placement of individual/role,³⁰ physical and environmental characteristics,³⁰ communication,³⁰ introducing different nursing method,³² stress management,^{11, 34} management interventions,⁴² training for managers/ supervisors,¹ 1 changes to work load and/ or work schedule,^{11, 45} psychosocial interventions,⁴⁵ changing work practices.¹¹

Outcomes reported in included reviews were: burnout or burnout prevention,^{11, 15, 22, 25, 28, 35-36, 42-43} emotional exhaustion,²² depersonalisation,²² mental health,^{23-25, 44} absenteeism,^{23, 25, 28} turnover/ retention rates,^{25, 44} stress reduction,^{11, 16-17, 25, 42} job satisfaction,^{25, 28, 42} job attitudes,²⁵ co-worker conflict,²⁵ job effectiveness,²⁵ emotional distress,²⁶ distress consequences,²⁶ irrationality,²⁶ stress management,^{27, 33, 39} organisational change,²⁸ cost-effectiveness,²⁹ process evaluation,³⁴ wellbeing,^{11, 45} performance measures,⁴⁵ and anxiety.¹¹

Evidence on individual or group level interventions

Studies looking at burnout

One review¹⁵ which included 17 studies of person-directed interventions reported positive changes in burnout in 14 of 17 studies, though in one study there was an unexpected significant increase in burnout. A review of 23 systematic reviews²³ found that cognitive behavioural programmes produced larger effects at the individual level compared with other interventions. In another review,²⁵ positive effects were seen for individual or group approaches including: worksite health promotion programme for mental health improvement and stress management training for absenteeism reduction. In one review,⁵ following participation in an intensive stress reduction programme, female mental health workers at risk of burnout experienced significantly lower emotional exhaustion and depersonalisation (one study). In a systematic review of 16 UK-based studies²⁷ on stress management interventions in the workplace, all intervention levels were found to contribute to or be associated with some positive outcomes. A Cochrane systematic review¹⁷ of 19 randomised or controlled clinical trials of workplace interventions to reduce stress in healthcare workers found limited evidence for a small but probably relevant reduction in stress levels from person-directed, and person-work interface interventions among health care workers. A UK-focused evidence review¹¹ found that there is reasonable evidence that multi-faceted training, covering stress awareness, coping and stress reduction is an effective format (eight studies). Therapy and counselling (1 RCT) delivered during work time had a positive impact on mental wellbeing in the short term, as did a computerised Cognitive Behavioural Therapy programme (1 RCT). Exercise (2 RCTs) had positive effects on mental health, stress and anxiety. One RCT comparing transcendental meditation with a more conventional stress management programme found a positive impact on mental wellbeing in the longer term. Web based health promotion and lifestyle training package (1 RCT) were found to improve mental wellbeing at six months. Limited evidence from a review of two studies³⁵ would indicate that group work approaches have positive effects on burnout. The evidence available in one review³⁶ showed that police officers benefited from psychosocial interventions for prevention of psychological disorders. A Cochrane review of 10 RCTs⁴² to assess the effects of preventive staff-support interventions to healthcare workers found insufficient evidence for the effectiveness of stress management training interventions on job stress and burnout. Another review⁴³ found that two out of nine interventions with a person-directed approach had an effect on staff burnout for up to one month after the intervention. Another review²⁸ of individual interventions reported improved job satisfaction and positive effect on burnout.

Studies looking at work-related stress

A systematic review of 24 studies of preventive interventions²⁴ regarding mental health issues in organisations found that 67% of included studies reported positive

effects on mental health. A meta-analysis of 23 studies²⁶ using CBT or REBT based intervention programs demonstrates that these programs were effective in reducing emotional distress, distress consequences and reducing the level of irrationality in occupational settings. A systematic review of ten economic evaluations²⁹ found limited evidence that worksite interventions to prevent or treat mental health problems might be cost-effective, while those return to work interventions that included a full economic evaluation aimed at depressed employees did not seem to be cost-beneficial. A systematic review of 90 studies³¹ on job stress interventions, rated in terms of the degree of systems approach used, found that individual focused approaches are effective at the individual level, favourable affecting individual-level outcomes, but tend not to have favourable impacts at the organisational level. A review of 64 studies of stress management interventions³³ in the workplace found that the large number of different stress-management techniques using a wide range of outcome measures makes it difficult to draw from conclusions about the effectiveness of the interventions. Meditation produced the most consistent results. A review of 41 process evaluations³⁴ found that the more positively participants perceived the sessions, and the context in terms of warmth and safe climate, the greater the likelihood of altering job-related stress; and the more frequent the monitoring of participants' attitudes toward intervention and its effects, the more awareness is raised about personal stress. A systematic review of 36 studies (55 interventions)³⁷ found a significant medium-large effect size across all studies, with cognitive-behavioural programmes consistently producing larger effects than other types of interventions. A review of two papers,⁴⁴ found that focusing on individuals rather than the organisation as a whole produced better results. A systematic review of stress management interventions that might be relevant to GPs and their patients³⁹ found that a number of interventions produced positive though modest effects, in particular relaxation and cognitive behavioural skills. A systematic review of 48 studies of work-related stress interventions⁴¹ found stress management interventions were effective, with cognitive-behavioural interventions being more effective than the other intervention types. A systematic review of 19 studies of mindfulness based interventions in organisational settings for the reduction of psychological effects¹⁷ found that they were effective, and the effects were consistent across participant and intervention types and were maintained at follow-up. However, there was little evidence to suggest that mindfulness-based interventions are more effective than other stress management interventions such as relaxation and yoga.

Evidence on organisational level interventions

Studies looking at burnout

There were two organisation-directed interventions included in the Awa 2010 review.¹⁵ In one study that involved cognitive behavioural and management skill training with social support, there was a significant reduction in burnout. The second

organisation-direction intervention involved primary nursing and personal care giving and there was no change. The review found that positive changes in burnout lasted longer in the organisation-directed intervention study than in person-directed interventions in other included studies. A review of 23 systematic reviews²³ found that physical activity as an organisational intervention reduced absenteeism. Positive effects were seen for organisational approaches²⁵ including participatory approaches for stress reduction, multimodal worksite health promotion program for mental health improvement, and employee problem solving teams for job effectiveness improvement. In one review levels of burnout did not change for mental health workers who attended staff development workshops.²² However staff that attended the workshops with consultation experienced significantly lower levels of emotional exhaustion (1 study). Another UK evidence review¹¹ found insufficient evidence of quality to comment on interventions involving a participatory approach to organisational change (10 studies) or training for managers and supervisors (4 studies). Taking a vacation (1 study) was found to impact positively on burnout in the short term, and changing the shift system from 7 day consecutive shifts to the 35 day Ottawa system (1 study) was also found to positively impact on mental wellbeing. Psychosocial Intervention courses (2 studies) were also found to have a positive impact on burnout in the short term. Low quality evidence in another review⁴² showed that management interventions may improve some measures of job satisfaction. Both included studies in one review⁴³ with a work-directed approach led to a reduction in staff burnout lasting up to 1 year after the intervention.

Studies looking at work-related stress

Psychosocial interventions or participatory research brought positive and significant results to work and mental health outcomes in workers in one review.²⁴ A UK-focused systematic review of 74 studies on interventions for stress management or prevention in the workplace³⁰ reported that “of particular significance are studies that adopted a comprehensive approach, encompassing situation-specific methods that have been identified by promoting a participative process involving employees from all levels of the organisation” Another UK-based review of 8 studies⁴⁵ found that “sociotechnical” interventions, such as changes to workload and work schedule, clearly reduced the presence of stressors and had positive effects on wellbeing and performance measures, while the effect of psychosocial interventions were less consistent. Those psychosocial activities designed to improve decision authority were most successful, leading to increased participation and autonomy, and accompanied by improvements in wellbeing and performance. The general pattern appeared to be that more targeted and focused interventions, aimed at changing a specific aspect of work, are more successful than psychosocial interventions, which may encompass multiple changes, and interventions focused on a general work characteristic (such as demands or control). In a systematic review of 16 UK-based studies²⁷ on stress management interventions in the workplace, positive outcomes from interventions at the organisational level were seen from: cognitive behavioural therapy; employee assistance programs; co-worker support; participation and

autonomy; job design and restructuring. A Cochrane systematic review¹⁶ of 19 randomised or controlled clinical trials of workplace interventions to reduce stress in healthcare workers found limited evidence for a small but probably relevant reduction in stress levels from organisational interventions among health care workers. Another systematic review³² found more evidence for the effectiveness of programmes based on providing personal support than environmental management to reduce stressors. A systematic review of 90 studies of job stress interventions,³¹ rated in terms of the degree of systems approach used, found that organisationally focused approaches are beneficial at both individual and organisational levels. A review of 41 process evaluations³⁴ found that the greater the involvement and support from supervisors and managers, the better the intervention implementation and likely outcomes achieved, and the smaller the intervention dose delivered, the smaller the chances of altering organisational climate.

The review of work-related stress conducted for the Work Foundation⁴⁶ found that, to control work-related stress individuals need to be equipped with stress management techniques, organisational changes need to be directed at stressors and sources of work stress located in the culture and climate of the organisation need to be addressed through creation of a 'healthy organisation' which takes responsibility for stress reduction, adopting a participatory, non-stigmatizing, communicatively open approach to do so.

A purely structural or environmental change such as changing peoples' work schedules does not necessarily influence workplace culture. Participatory interventions can run into problems within unfavourable organisational cultures. An aspect of a healthy organisation is employer-employee trust which can be built through the successful participation of employees in planning and implementation of programmes.⁴⁷ This therefore involves system change, and confidence and capacity building through a process of developing a culture of learning about mental health across organisations.

Support from managers and supervisors has been identified as crucial to the success of stress management interventions and the more positive the participant perception of warmth and safe climate (i.e. above all else non-stigmatizing) the greater likelihood of affecting job-related stress.³⁴ Peer support was very important in facilitating the success of both stress management and recovery-focused interventions.⁴⁸⁻⁴⁹

Evidence on interventions in large workplaces

In all of the included systematic reviews, with the possible exception of Westermann et al 2014, interventions were evaluated in large organisations, or in small units that were part of large organisations (eg, a ward in a hospital), or it was unclear whether

the organisations were large or small, but in most cases it could probably be assumed that the organisation was large, as the population was, eg, health care workers.

Evidence on interventions in small/medium workplaces

There is often a focus on large organisations in the burnout and work-related stress literature, but there needs to be a larger focus on small/medium enterprises. Figures from 2013 indicate that SMEs accounted for 99.9% of all private sector businesses in the UK, and 59.3% of private sector employment. SMEs employed 14.4 million people and had a combined turnover of £1,600bn. Small businesses alone accounted for 47% of private sector employment and 33.1% of turnover.²¹

While SMEs make up a large proportion of businesses, their employees may experience proportionately less work-related stress. Based on the Labour Force Survey, small workplaces (<50 employees) had the lowest prevalence rate of work-related stress with an estimated 1,070 cases per 100,000 people, followed by medium workplaces (50-249 employees), estimated at 1560 cases per 100,000 people and the highest rate was among large workplaces (250+ employees) with an estimated 1,730 cases per 100,000 in 2013-14.⁸

None of the included systematic reviews, with the possible exception of Westermann et al, 2014,⁴³ included small (<50 employee) or medium (50-249 employee) organisations. Westermann et al. included nursing staff⁴³ in the setting of inpatient elderly and geriatric long-term care, which could be in a hospital (large organisation) or in a nursing home (small–medium). The review found that work-directed, and combined person and work-directed interventions, are able to achieve beneficial longer-term effects on staff burnout. Person-directed interventions achieve short-term results in reducing staff burnout, though the evidence is limited.

Interventions aiming to reduce risk of/prevent burnout or work-related stress (primary and secondary)

Almost all of the included systematic reviews looked at primary and secondary prevention of burnout or work-related stress, rather than tertiary treatment.

Interventions aiming to treat burnout (tertiary)

Studies looking at burnout

None of the included reviews looked at the treatment of burnout.

Studies looking at work-related stress

A systematic review of economic evaluations²⁹ found that those return to work interventions that included a full economic evaluation aimed at depressed employees did not seem to be cost-beneficial. In another review,⁴⁴ for people already experiencing common mental health problems at work, there was strong evidence from four studies demonstrating that, the most effective approach is brief (up to 8 weeks) of individual therapy, especially cognitive behavioural in nature. The intervention seems to be effective whether delivered face-to-face or via computer-aided software, the latter finding being based on one study. A stronger effect is associated with employees in high-control jobs.