

Janina M. Björk-Fant

Mental well-being at work

Support and protective factors of work engagement
and work-life balance in contemporary working life





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Vasa, den 16 april 2023

Janina M. Björk-Fant

Abstract

Björk-Fant, Janina M., 2023: Mental well-being at work: support and protective factors of work engagement and work-life balance in contemporary working life

Supervisors: Associate Professor Anna K. Forsman, DrPH, Åbo Akademi University; Assistant Professor Pernilla Bolander, PhD, Stockholm School of Economics

Background: The promotion of mental well-being at work, including work engagement and work-life balance, is a top priority for organizations worldwide. Organizations are likely to benefit from prioritizing mental well-being at work in several ways. Besides contributing to a health-promoting society, it can enhance organizational productivity. In addition, contemporary worldwide trends, including globalization, the rapid technological advancement, and an increasingly diverse workforce change not only the nature of work tasks but also the terms and conditions of working life, which inevitably put pressure on workers and raise concerns about their mental well-being at work. As the previously tributed Nordic welfare model is increasingly contested, this applies to the Finnish working life as well, warranting research on the support and protective factors of mental well-being at work.

Aim: To examine psychosocial factors that are associated with mental well-being at work, particularly with work engagement and work-life balance, to examine whether these two aspects of mental well-being are associated, and to gather the evidence base for the effectiveness of interventions focused on promoting work engagement by developing workplace resources from bottom-up.

Methods: This thesis constitutes four separate studies. Studies 1–3 were based on data from two different population-based, cross-sectional interview survey studies. Studies 1 and 2 were based on sub-data from the Statistics Finland’s 2018 Quality of Work Life Survey (QWLS; OSF, 2018). Specific inclusion criteria were applied in both studies to meet the study aim, resulting in a sample constituting $N=1431$ respondents in Study 1 and $N=3790$ respondents in Study 2. Logistic regression (Odds Ratios, 95 % confidence intervals) was used to analyze the data in these two studies. Study 3 ($N=35401$), in turn, utilized sub-data from the European Working Conditions Survey 2015 (EWCS, 2015), and data were analyzed using multilevel regression modelling. Study 4 was a systematic review and meta-analysis. Systematic searches were conducted in

multiple online databases. Publication year range was 2000–2020. Eligibility criteria were defined, for example specifying that the interventions had to aim at promoting work engagement by developing workplace resources from bottom-up. A meta-analysis was conducted on a sub-set of the included studies.

Results: Key findings from Studies 1–3 in this thesis highlight that support and protective factors of mental well-being at work go beyond individual factors, as they also include psychosocial factors in the family and work settings, as well as socio-economic factors in the country and welfare regime settings. An important contribution of Study 3 was the demonstrated positive association between work engagement and work-life balance at the European level. Further, levels of work engagement and work-life balance were generally high among the studied workers in the Finnish (Studies 1 and 2) and in broader terms – Nordic and European (Study 3) – welfare contexts. While this supports the continued use of a universal working life model in the Nordic welfare states, part of the findings in Studies 1 and 2 demonstrated that the model fails to deliver on its promises, particularly promises of an equal working life for men and women. At the same time, a key finding of Study 4 was that a standardized, universal approach is to prefer over a tailored approach in bottom-up interventions specifically aimed at promoting work engagement. The meta-analysis in Study 4 was based on 24 studies and showed a small but promising intervention effect on work engagement.

Conclusion: Taken together, the findings of this thesis make clear that a system-oriented thinking is needed, in which factors at multiple levels are considered in the promotion of mental well-being at work. This means that not only background, psychological, and psychosocial factors in the work setting should be considered in research on mental well-being at work, but also psychosocial factors in the family setting as well as overarching, contextual factors in the socio-economic setting. The findings also stress the need for research to go beyond the traditional focus on negative aspects of mental well-being at work, to also include positive aspects. Further, the results demonstrated in this thesis advocate the use of an integrative perspective, as this can further our understanding of mental well-being at work and how it is best supported and protected in contemporary working life.

Keywords: Mental well-being at work, work engagement, work-life balance, positive organizational psychology, workplace health promotion, Finland, The Nordic countries, Europe

Abstrakt

Björk-Fant, Janina M., 2023: Psykiskt välbefinnande på arbetsplatsen: stöd- och skyddsfaktorer för arbetsengagemang och balans mellan arbetsliv och övrigt liv i det samtida arbetslivet

Handledare: Äldre universitetslektor Anna K. Forsman, DrPH, Åbo Akademi;
Biträdande professor Pernilla Bolander, PhD, Handelshögskolan i Stockholm

Bakgrund: Främjandet av psykiskt välbefinnande på arbetsplatsen, inklusive arbetsengagemang och balansen mellan arbetsliv och övrigt liv, prioriteras av organisationer världen över. Organisationer kan vinna på att prioritera psykiskt välbefinnande på arbetsplatsen på många sätt. Förutom att det kan bidra till ett hälsofrämjande samhälle, kan det också leda till ökad produktivitet. Pågående globala trender, inklusive globalisering, snabb teknologisk utveckling och en alltmer mångfaldig arbetskraft håller dessutom på att förändra arbetsuppgifters natur, arbetsvillkor och -förhållanden, som oundvikligen sätter press på arbetstagare och skapar oro kring deras psykiska välbefinnande på arbetsplatsen. Eftersom den tidigare prisade nordiska välfärdsmodellen alltmer ifrågasätts, gäller detta även det finländska arbetslivet, vilket skapar ett behov av forskning om stöd- och skyddsfaktorer för psykiskt välbefinnande på arbetsplatsen.

Syfte: Att undersöka sambandet mellan psykosociala faktorer och psykiskt välbefinnande på arbetsplatsen, särskilt arbetsengagemang och balansen mellan arbetsliv och övrigt liv, att undersöka om det finns ett samband mellan dessa två aspekter av psykiskt välbefinnande, och att samla evidens för effektiviteten i interventioner fokuserade på att främja arbetsengagemang genom att utveckla arbetsplatsresurser nerifrån och upp.

Metod: Avhandlingen består av fyra separata studier. I Studierna 1–3 användes intervjuenkätdata från två olika populationsbaserade, tvärsnittsstudier. Studierna 1 och 2 baserades på data från den upprepade Arbetsmiljöundersökningen i Finland (QWLS) insamlat år 2018. I bägge studier användes specifika inkluderingskriterier som gick i linje med syftet, vilket resulterade i ett sampel bestående av $N=1431$ respondenter i Studie 1 och $N=3790$ respondenter i Studie 2. Logistisk regressionsanalys (Oddsquotienter, 95 % konfidensintervall) användes för att analysera data i dessa två studier. I Studie 3 användes data från den upprepade enkäten om arbetsförhållanden i Europa (EWCS) insamlat år 2015. Även här användes specifika inkluderingskriterier, vilket resulterade i ett sampel bestående av $N=35401$

respondenter. Data analyserades med hjälp av multinivå regressionsmodellering i denna studie. Studie 4 var en systematisk översikt och meta-analys. Systematiska sökningar genomfördes i flera olika digitala databaser. Publikationerna behövde vara från åren 2000–2020 för att inkluderas. Det fanns även en rad inkluderingskriterier, till exempel specificerades det att interventionerna behövde vara ämnade att främja arbetsengagemang genom att utveckla arbetsplatsresurser nerifrån och upp. En meta-analys genomfördes på basis av en del av de inkluderade studierna.

Resultat: Nyckelresultaten från Studierna 1–3 i den här avhandlingen belyser att stöd- och skyddsfaktorer för psykiskt välbefinnande på arbetsplatsen inkluderar andra faktorer än enbart individuella faktorer, såsom psykosociala faktorer i familje- och arbetsmiljön, socio-ekonomiska faktorer i den nationella kontexten och välfärdsregimskontexten. Ett viktigt bidrag i Studie 3 var att ett positivt samband mellan arbetsengagemang och balansen mellan arbetsliv och övrigt liv kunde konstateras på europeisk nivå. Vidare var nivåer av arbetsengagemang och balansen mellan arbetsliv och övrigt liv generellt sätt höga hos de studerade arbetstagarna i den finländska (Studierna 1 och 2) och i bredare termer – nordiska och europeiska (Studie 3) – välfärdskontexten. Medan detta stöder det fortsatta användandet av en universell arbetslivsmodell i de nordiska välfärdsstaterna, pekar en del av resultaten i Studierna 1 och 2 på att modellen misslyckas med att leverera vad den lovat, särskilt gällande lovorden om ett jämställt arbetsliv för män och kvinnor. Samtidigt är ett av nyckelresultaten i Studie 4 att ett standardiserat, universellt angreppssätt är att föredra framom skraddarsydda angreppssätt i interventioner vars fokus är att främja arbetsengagemang nerifrån och upp. Meta-analysen i Studie 4 baserade sig på 24 studier och visade en liten men lovande interventionseffekt i termerna av ökat arbetsengagemang.

Konklusion: Sammantaget visar resultaten av denna avhandling att ett system-orienterat tänkande behövs, där faktorer på flera nivåer beaktas i främjandet av psykiskt välbefinnande på arbetsplatsen. Det här betyder att inte bara bakgrundsfaktorer, psykologiska faktorer och psykosociala faktorer i arbetskontexten bör beaktas, utan även psykosociala faktorer i familjemiljön och övergripande, kontextuella faktorer i den socio-ekonomiska miljön. Resultaten betonar också behovet av forskning som sträcker sig längre än till det traditionella fokuset på negativa aspekter av psykiskt välbefinnande på arbetsplatsen, det vill säga framtida forskning bör också inkludera positiva aspekter. Vidare förespråkas ett integrativt perspektiv på basis av resultaten av den här avhandlingen, eftersom detta kan utveckla vår förståelse för

psykiskt välbefinnande på arbetsplatsen och hur det bäst kan stödas och skyddas i det samtida arbetslivet.

Nyckelord: Psykiskt välbefinnande på arbetsplatsen, arbetsengagemang, balansen mellan arbetsliv och övrigt liv, positiv organisationspsykologi, arbetsplatshälsopromotion, Finland, Norden, Europa

Tiivistelmä

Björk-Fant, Janina M., 2023: Psyykkinen työhyvinvointi: voimavaroja työn imulle ja työn ja muun elämän yhteensovittamiselle nykyisessä työelämässä
Ohjaajat: Vanhempi yliopistonlehtori Anna K. Forsman, DrPH, Åbo Akademi;
Nuorempi apulaisprofessori Pernilla Bolander, PhD, Stockholm School of Economics

Tausta: Organisaatiot ympäri maailmaa pitävät tärkeänä työhyvinvoinnin edistämistä, mukaan lukien työn imua ja työn ja muun elämän yhteensovittamista. Organisaatioiden investoinnit työhyvinvoinnin edistämiseen voivat olla kannattavia monin eri tavoin. Tämä ei pelkästään ole tapa organisaatiolle osallistua hyvinvoivan yhteiskunnan rakentamiseen vaan myös tapa lisätä tehokkuutta omassa toiminnassaan.

Tämän lisäksi maailman – ja työn – murros, mukaan lukien globalisaatio, teknologinen myllerrys ja yhä monipuolisempi työvoima, muuttaa työtehtävien tekoa, työehtoja ja työolosuhteita. Työn murros tuo väistämättä lisäpainetta työntekijöille ja se, miten nämä vaikuttavat heidän työhyvinvointiinsa, herättää huolta. Pohjoismainen hyvinvointimalli on aikaisemmin ollut hyvin kehuttu, mutta sen toimivuus on yhä enemmän kyseenalaistettu työn murroksessa. Tästä syntyy tarve tutkia työn voimavaroja, jotka vähentävät työn vaatimuksia ja tukevat psyykkistä työhyvinvointia.

Tavoitteet: Tutkia yhteys psykososiaalisten tekijöiden ja psyykkisen työhyvinvoinnin välillä. Tutkimus keskittyi erityisesti kahteen työhyvinvoinnin tekijään: työn imuun ja työn ja muun elämän yhteensovittamiseen. Tämän lisäksi tutkimuksen tavoitteena oli tutkia, mikäli näiden tekijöiden välillä on yhteys. Tutkimuksen tavoitteena oli myös koota tutkimuksesta syntyneitä todisteita tehokkuudesta interventioissa, joissa työn imua edistetään voimavarojen avulla ja joissa voimavarat rakennetaan alhaalta ylös.

Menetelmät: Väitöskirja sisältää neljä yksittäistä tutkimusta. Kolmessa ensimmäisessä tutkimuksessa käytettiin kahden eri haastattelukyselyn tietoja, joissa eri väestöpohja; poikkileikkaustutkimuksena. Kaksi ensimmäistä perustuivat vuonna 2018 tehtyyn suomalaiseen työolotutkimukseen (QWLS). Molemmissa tutkimuksissa käytettiin tavoitteiden mukaisia soveltuvuuskeriteerejä, joiden tuloksena oli 1431 osallistujasta koostuva otos ensimmäisessä tutkimuksessa, ja 3790 osallistujasta koostuva otos toisessa

tutkimuksessa. Logistista regressioanalyysia (todennäköisyyksien suhde, 95 % luottamusväli) käytettiin analysoimaan dataa molemmissa tutkimuksissa. Kolmas tutkimus perustui vuonna 2015 tehtyyn eurooppalaiseen työolotutkimukseen (EWCS). Tavoitteiden mukaisia soveltuvuuskriteerejä käytettiin myös tässä tutkimuksessa, jonka tuloksena oli 35401 osallistujasta koostuva otos. Data analysoitiin monitasoisten regressiomallien avulla. Neljäs tutkimus oli systemaattinen kirjallisuuskatsaus ja meta-analyysi. Systemaattinen tiedonhaku suoritettiin moni eri digitaalisissa tietokannoissa. Julkaisut vuosista 2000–2020 otettiin mukaan katsaukseen. Erilaiset soveltuvuuskriteerit olivat määriteltyjä, joiden mukaan esimerkiksi interventioiden tavoitteet täytyivät olla työn imun edistämistä alhaalta ylös rakennettujen voimavarojen avulla. Osa mukana olleista tutkimuksista sisältyivät meta-analyysiin.

Tulokset: Avaintulokset väitöskirjan kolmessa ensimmäisessä tutkimuksessa havainnollistavat, että työhyvinvoinnin voimavaroja sisällyttävät myös muut tekijät kuin tekijät yksilön tasolla, esimerkiksi psykososiaaliset tekijät perhe- ja työympäristössä, sosioekonomiset tekijät kansallis- ja hyvinvointivaltiomallin tasolla. Kolmannessa tutkimuksessa ilmeni tärkeä löytö: työn imu ja työn ja muu elämän yhteensovittamisen välillä on yhteys Eurooppa tasolla. Lisäksi tutkimus osoitti, että tutkittujen suomalaisten (tutkimus 1 ja 2) ja laajemmin ottaen – pohjoismaiden ja eurooppalaisten (tutkimus 3) – työntekijöiden työn imu ja työn ja muun elämän yhteensovittaminen olivat korkeatasoisia. Nämä tulokset tukevat yleismaailmallisen työelämämallin jatkuvaa käyttöä Pohjoisissa hyvinvointivaltioissa. Samaan aikaan osa tuloksia ensimmäisessä ja toisessa tutkimuksessa osoittavat, että malli ei ole tuottanut lupausiensa mukaisesti, erityisesti lupaukset koskien tasa-arvoista työelämää. Neljännen tutkimuksen avaintulos on myös, että standardoitu, yleismaailmallinen lähestymistapa on suositeltava räätälöityjen ratkaisujen sijaan interventioissa, joissa työn imua edistetään alhaalta ylös. Meta-analyysi neljännessä tutkimuksessa perustui 24 tutkimukseen ja osoitti pientä mutta lupaavaa interventiotehokkuutta työn imun merkeissä.

Johtopäätökset: Yleisesti ottaen väitöskirjan tulokset osoittavat, että on tarve systeemiorientoidusta ajattelutavasta, jossa monitasoiset tekijät otetaan huomioon psyykkisen työhyvinvoinnin edistämisessä. Tämä tarkoittaa, että ei pelkästään taustatekijöitä, psykologisia tekijöitä ja psykososiaalisia tekijöitä työympäristössä oteta huomioon, vaan myös psykososiaalisia tekijöitä perheympäristössä sekä laajoja, sosioekonomisia tekijöitä. Lisäksi

tutkimuksessa nousi esiin, että tutkimustarve on perinteisen keskittymisen työhyvinvoinnin negatiivisiin osa-alueihin laajempi, tulevaisuudessa tutkimuksen täytyy myös sisällyttää myönteisiä osa-alueita. Tämän väitöskirjan tuloksen pohjalta voidaan kannattaa integratiivista näkökulmaa, sen avulla meidän ymmärryksemme nykyisen työelämän työhyvinvoinnista, sen edistämisestä ja turvaamisesta voi kehittyä.

Avainsanat: Psykkinen työhyvinvointi, työn imu, työn ja muun elämän yhteensovittaminen, positiivinen organisaatiopsykologia, työhyvinvoinnin edistäminen, Suomi, Pohjoismaat, Eurooppa

List of original publications

Article I

Björk, J. M., Nordmyr, J., & Forsman, A. K. (2022). Reconciling work and family demands and related psychosocial risk and support factors among working families: A Finnish national survey study. *International Journal of Environmental Research and Public Health*, 19(14), 8566. <https://doi.org/10.3390/ijerph19148566>

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Article III

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Article IV

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1. Introduction

Organizations worldwide increasingly consider the promotion of mental well-being at work a top priority, “a business value of strategic importance” (Nordic Business Report, 2019, p. 41). According to a recent report by the Chartered Institute of Personnel and Development (CIPD, 2021), 50 % of organizations spanning the private, public, and voluntary sectors in UK have a well-being strategy in place for their workers. This report also makes clear that the proportion of senior leaders that consider mental well-being at work a priority is 75 %. However, between sector-differences exist, with public sectors having the most proactive approach to well-being. Size of the organization also seems to matter, as large organizations are reported to be more likely to act for the well-being of workers than small and medium-sized organizations. Another UK-based survey showed that a key driver of well-being strategies is to promote work engagement (Reward & Employee Benefits Association [REBA], 2018). A majority of the respondents in this survey reported high pressure working environments as the biggest threat to well-being. To name a few focal points of contemporary mental well-being at work programs, it is evident from the report that 84 % address mental well-being, 69 % work-life balance specifically, and 85 % physical activity.

At the time of writing, we are in the wake of the COVID-19 pandemic. Undoubtedly, the pandemic has put well-being at the forefront of the agenda for organizational leaders and policy makers worldwide. Thus, the latest business and survey reports on mental well-being at work published by influential, large-scale institutes and consulting firms worldwide naturally are focused on the impact of the pandemic and the post-pandemic challenges organizations are faced with when they are up to support workers returning, at least in part, to the office. For example, an interview with a workplace concept designer in the Nordic Business Report 2022 makes clear that organizations not only must reconsider the entire concept of workplace, but also the entire culture of working. Simply getting back to old habits will not sustain and promote workers’ mental well-being (Nordic Business Report, 2022). Turning to the published survey results, the 2021 report by CIPD shows that over half of organizations have increased support of mental well-being or worker benefits in response to the pandemic. Likewise, the Health and Well-being Touchstone Survey conducted by PricewaterhouseCooper (PwC, 2021) revealed that 44 % of employers in USA added or increased wellness programs

and that 53 % of organizations added mental health programs to address COVID-19 concerns.

Mental well-being at work has long been attracting the attention of scholars as well (Litchfield et al., 2016), and the interest has been burgeoning in recent years (Carlisle & Hanlon, 2008; Kowalski & Loretto, 2017). This burgeoning interest in mental well-being at work applies to research targeting the Finnish – and in broader terms Nordic – welfare context as well (e.g., Lintula et al., 2022). Historically, the Nordics have been referred to as welfare paradises (Haavind & Magnusson, 2005), which effectively support and protect mental well-being at work. However, contemporary global trends, including economical, technological, demographical, and political trends, challenge the Nordic welfare model and call for action (Torp & Reiersen, 2020).

Hitherto, however, the promotion of mental well-being at work has largely been regarded either as a by-product of initiatives that have been intended to promote the single end goal, productivity, or alternatively, as a means to attain this particular end. Indeed, organizations are unlikely to act responsibly and sustainably by promoting mental well-being at work on mere ethical grounds. Researchers, however, increasingly advocate a pluralist perspective, in which mental well-being and productivity both are regarded important end goals (Swales et al., 2014; Guest, 2017). Besides contributing to a health-promoting society (Di Fabio, 2017), giving priority to mental well-being at work is regarded important for organizations as pressures at work, and more widely, in society, carry threats to the well-being of workers (Guest, 2017). In addition, organizations are likely to benefit from prioritizing mental well-being at work in terms of enhanced productivity, usually referred to as the happy worker-productive worker thesis (Wright & Cropanzano, 2000). To address mental well-being at work and productivity effectively, however, scholars across different fields of research agree that the traditional focus on reducing malfunctioning, weaknesses, and threats must be expanded to also include an understanding and assessment of optimal functioning, strengths, and potential (e.g., Seligman & Csikszentmihalyi, 2000; Seligman, 2002; Schulte & Vainio, 2010; Day & Nielsen, 2017).

Further, mental well-being at work can be investigated from a range of perspectives. To advance our understanding of what makes workers feel well, engaged, and balanced in contemporary Finnish and international working life, this thesis in developmental psychology takes an integrative perspective on mental well-being at work, specifically focusing on two aspects: work engagement and work-life balance. It builds on to the knowledge produced in

various sub-fields of psychology, particularly positive organizational psychology. Even though sub-fields of psychology emphasize different psychological aspects, all share the characteristic of taking largely individual-centered, psychological approaches. Therefore, this thesis draws on health science disciplines as well, particularly on workplace health promotion, offering socio-environmental and population-based perspectives in addition to the individual-centered psychological perspectives, which together allow for a holistic and integrative approach to mental well-being at work. Not only the psychosocial, but also the overarching, contextual (i.e., workplace and socio-economic) factors are thus recognized and studied in the present thesis.

1.1. Defining mental well-being at work

Before delving into the definition of the specific term mental well-being at work as applied in the context of this thesis, it is necessary first to consider the conceptual boundaries of mental well-being.

According to Ryan & Deci (2001), mental well-being refers to “optimal experience and functioning” (p. 141). Even though there has been considerable debate about what constitute optimal experience and functioning, scholars have, in a rough sense, approached this construct from either a hedonic or an eudaimonic viewpoint. Hedonic well-being is about a subjective experience of happiness (Diener et al., 1999) and denotes “the pleasant life” (Gallagher et al., 2009). This type of well-being has been studied most extensively, and the work conducted by Diener (1984) has been very influential within this research tradition. Diener (1984) uses the term subjective well-being as a synonym to hedonic well-being, and considers it to consist of three aspects, that is, life satisfaction, the presence of positive mood, and the absence of negative mood. Eudaimonic well-being, in turn, refers to the realization of human potential (Ryff & Keyes, 1995) and denotes the “meaningful life” (Gallagher et al., 2009). In this stream of research, the works by Ryff (1989) and Keyes (1998) have been very impactful. According to Ryff (1989), psychological well-being constitutes six components: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Hence, an underlying assumption is that individuals strive to function fully and realize their unique potential (Ryff & Keyes, 1995). Initially, eudaimonic well-being concerned the well-being of the lone individual, but Keyes’s (1998) work on social well-being has expanded this tradition of well-being to also include the individual’s social functioning.

It may be theoretically appealing to keep the concepts of hedonic well-being and eudaimonic well-being separate. However, empirical research has shown that these constructs are inter-related (Linley et al., 2009; Pancheva et al., 2020) and, to some extent, even overlapping (Fisher, 2014). The potential costs of such a distinction have also been questioned (Kashdan et al., 2008). Therefore, an integrative approach has increasingly been suggested, conceptualizing well-being as “flourishing mental health” (Keyes, 2005/2007; Keyes et al., 2002). Empirical support has been found for a model in which hedonic, eudaimonic, and social well-being are integrated (Gallagher et al., 2009), thus contributing to an increased understanding of the well-being construct. However, a great deal of research is warranted on both correlates and consequences of each of the well-being components to further advance our understanding of well-being (Gallagher et al., 2009).

Besides this main classification of mental well-being constructs according to their philosophical tradition, other classifications exist. For example, both state-like and trait-like well-being constructs have been developed (Fisher, 2014). Mental well-being can also be viewed either as a context-free or as a domain-specific construct (e.g., specific to the work or family domain) (Ilies et al., 2007).

In sum, mental well-being is a multidimensional construct and many researchers have attempted to define it. Even though the definition of mental well-being remains somewhat inconclusive, researchers seem to agree that the constructs of hedonic and eudaimonic well-being are best understood from an integrative perspective. Further, the importance of acknowledging that eudaimonic well-being usually contains a hedonic component and vice versa is highlighted.

For the purposes of this thesis focusing on two specific aspects of mental well-being at work, work engagement and work-life balance, the constructs of hedonic, eudaimonic, and social well-being will be understood from an integrative perspective. Further, mental well-being will be defined in accordance with the broad definition provided by Ryan & Deci (2001). In line with this definition, mental well-being at work pertains specifically to the optimal experience and functioning of workers, that is, individuals participating in contemporary working life. Thus, the worker-concept, as applied in this thesis, includes not only employees, but also, for example, independent contractors, business owners, and executives.

1.2 Contemporary workers and working life

Work remains a key activity for many individuals and for society alike. Contemporary workers do not only have access to income, but also to a range of other important assets for various domains in life. For example, through work, individuals can gain assets that may impact their mental well-being, such as social status and identity, belonging to a community, and skills development (Torp & Reiersen, 2020). Further, as work can promote mental well-being of workers, the workplace is regarded an important setting for the building of healthy societies (Di Fabio, 2017). Working life is, however, undergoing dramatic changes, driven by a variety of worldwide trends, including economical, technological, demographical, and political trends. The most important trends impacting contemporary workers and working life in the European countries, and in the Nordic countries in particular, are discussed below.

First, globalization is a trend with great economic impact, in which people, money, products, and services easily and frequently travel across national borders (Torp & Reiersen, 2020). The globalization, in turn, intensifies international competition and creates a dynamic working context. For organizations, this means less time to create resourceful environments for their workers. Thus, organizations must rely on workers' proactive behavior and engagement (e.g., Grant & Ashford, 2008; Bakker, 2017). For workers, in turn, this implies increased work demands, in terms of work efficiency, task complexity, and skills requirement (French et al., 2018; Gragnano et al., 2020). Moreover, workers who wish to be regarded as engaged and important for the organization's success must go beyond taking care of one's core responsibilities by demonstrating extra-role behavior (e.g., engaging in mentoring tasks and volunteering to work overtime; Leiter & Bakker, 2010).

Another trend impacting contemporary working life, which is related to globalization, is the rapid technological advancement. There is no doubt that work is increasingly boundaryless and flexible with the help of technology. Loosely regulated jobs which are possible to conduct anywhere, at any time have dominated especially the Nordic labor market for a while now already (Allvin et al., 2013). The technological advancement marks a remarkable shift from the traditional, external regulation of work to individual self-regulation, with implications for both individuals and organizations. On the one hand, individuals experience greater autonomy. On the other, they are increasingly accountable for their work, including setting their own boundaries between work and personal life. Boundary management preferences can differ between workers; while some workers have a preference for segmentation (i.e., they want to keep work and personal life separate), others have a preference for

integration (i.e., they want to blend and integrate work and personal life) (Kossek et al., 2012; Kreiner et al., 2009). In effect, boundary management preferences impact work-life balance (Mellner et al., 2014). Organizations, in turn, are up to find new ways of organizing, conducting, and managing work (Shifrin & Michel, 2022), as well as supporting their workers in reconciling work and personal life by offering new arrangements and policies.

Moreover, the covid-19 pandemic allowed the use of technology at work to progress even more quickly. The covid-19 pandemic boosted remote work (also referred to as telework, virtual work), as workers around the world, including in Finland, were enforced working outside the office, predominantly from home. Organizations are predicted to increasingly adopt modern and flexible models of work in the post pandemic era, including so called hybrid and multilocal work models (Babapour Chafi et al., 2022; Shifrin & Michel, 2022). In the hybrid model of work, workers alternate between working outside and inside the confines of an office (Halford, 2005; Hislop & Axtell, 2009). Similarly, the multilocal work model highlights that work is conducted with the help of technology from different locations (Vartiainen & Hyrkkänen, 2010). Evidently, these flexible models of work are also desired by the workers themselves (Eurofound, 2020; Babapour Chafi et al., 2022). However, the long-term effects of the covid-19 pandemic on mental well-being at work are yet to be seen. As noted in the beginning of the thesis, dramatic effects on working life have been painted by the media and large consulting firms. Likewise, early research conducted during the enforced remote work occasioned in response to the pandemic pointed at a negative development with regards to mental well-being at work (Oksa et al., 2021). The good news are that more recent findings suggest a rather stable and largely positive pattern during the pandemic with regards to various aspects of mental well-being at work, such as work engagement and work ability (Mäkikangas et al., 2022; Kyrönlähti et al., 2022). These findings imply that the role of psychosocial and other socio-economic factors for the promotion of mental well-being at work go beyond that of the pandemic.

Next, major demographical trends are reflected in a more diverse workforce, for example constituting an increased share of women, dual-earner couples, single parents, and older workers (French et al., 2018; Gagnano et al., 2020). These developments work against the norm of the 'ideal worker' (Acker, 1990), who exists only for the job and who have no other responsibilities, such as family responsibilities. Thus, for many contemporary workers, juggling the demands of work and family is part of the everyday working life. While this

juggling can be challenging for all workers at times, research has demonstrated that it can be more challenging for some groups of workers than others. For example, research shows that it can be especially challenging for working families, that is, families constituting two working parents (Stoltz-Loike, 1992; Hughes, 2013). Romantic relationships are complex, as they enhance well-being (Hansen et al., 2007) but also stress (Mittelmark et al., 2004). Further, family members' demands from work and family are interrelated with each other's working conditions (Leineweber & Falkenberg, 2018), and children tend to increase the conflicting demands between work and family (Michel et al., 2011). Working mothers have been regarded as particularly challenged, since they experience high levels of parental demands (Roskam et al., 2022; Hagqvist et al., 2017; Nomaguchi & Fetto, 2019), as well as workers in family life stages including the care for young, dependent children, since the most intensive career-building and child-rearing years tend to coincide (Wepfer et al., 2015).

The working life has been shaped by trends in the political context as well. Traditionally, there has been a great variation of European labor market and welfare regimes. The Nordic countries have been viewed to have more similarities than differences, advocating a mutual working life model. The Nordic working life model has been viewed as distinct from other models in Europe, such as the liberal and conservative models (Bambra & Eikemo, 2009). Further, the Nordic countries have often been referred to as welfare paradises, due to the strong universal and egalitarian values (Haavind & Magnusson, 2005), which have been regarded to effectively support and protect mental well-being at work. For example, the Nordic welfare states have promoted an inclusive and equal working life by providing high-quality publicly funded childcare services, shared and paid parental leave, and flexible work arrangements for parents (Nordic Information on Gender [NIKK], 2019; Crompton & Lyonette, 2006; Mensah & Adjei, 2020). The Nordic welfare states generally also have done well in international comparisons on mental well-being at work and related mechanisms, for example with regards to levels of work-life balance (Crompton & Lyonette, 2006; Mensah & Adjei, 2020) and gender equality (e.g., World Economic Forum, 2020; Einarsdottir, 2020).

However, due to the global trends we are currently witnessing, the robustness of the Nordic working life model is increasingly contested (Torp & Reiersen, 2020). The concerns particularly pertain to the model's continued family- and women-friendliness, and, in more broad terms, inclusiveness (Borchorst & Siim, 2002/2008; Keskinen et al., 2016; Koskinen Sandberg,

2018). For example, unpaid work which traditionally has been carried out by women in the home has successively been undertaken by women in the public sector as low paid and undervalued work instead, such as caring for children and elderly, while men often earn more and work in the private sector, such as in the manufacturing or construction industry (Official Statistics of Finland [OSF] 2014/2015; NIKK, 2019; Koskinen Sandberg et al., 2018). In addition, widespread trends of neo-liberalization and austerity diminish the state's power to promote gender equality and inclusion, also at the Nordic labor market. For example, public care services are increasingly refamiliarized and reprivatized due to the neo-liberalization process, and austerity undermines the dual earner–dual carer focus (e.g., Elomäki & Ylöstalo, 2018). Taken together, these political developments greatly impact mental well-being at work and call for action. Therefore, experts now advise the Nordic countries to return to the basics, strengthening the foundational elements of the Nordic working life model. To this end, important means are to sustain and develop the cooperation between the government, employers' organizations, and trade unions (Alsos & Dolvik, 2021) and to maintain the strong traditions of democracy and participatory approaches at the workplace, in which a system-oriented thinking and the empowerment of workers are emphasized (Gustavsen, 2007; Arbeids og inkluderingsdepartementet, 2005).

2. Theoretical perspectives on mental well-being at work

2.1 Positive psychology

The theoretical framework of positive psychology was adopted in this thesis. Next, positive psychology is described, including a presentation of conservation of resources (COR) theory and the job demands–resources (JD–R) model which both stem from this theoretical framework.

For a long time, psychology was a discipline preoccupied with pathology, focusing on repairing human weaknesses and malfunctioning. The positive psychology movement has shifted the focus of psychology from the worst things in life to also include the best things in life, emphasizing human strengths and potential. Positive psychology thus centers around positive subjective experiences, such as well-being, satisfaction, and flow. It includes a focus on positive individual traits, for example in terms of interpersonal skills, high talent, and wisdom. Further, it is about positive institutions in which, for instance, responsibility, tolerance, and work ethic are valued (Seligman & Csikszentmihalyi, 2000; Seligman, 2002).

Since the seminal article by Seligman & Csikszentmihalyi (2000) was published, positive psychology has gained momentum and has been applied to research targeting different settings, including the organizational context. An underlying assumption of the sub-domain positive organizational psychology is that acting on positive psychology principles leads to highly valued outcomes for the individual and the organization alike. For example, Cameron & Caza (2004) noted that the overall aim of positive organizational psychology is to enable both the individual and the organization to flourish (Cameron & Caza, 2004). Similarly, Sweetman & Luthans (2010) argue that there is a need for organizations that wish to succeed in contemporary working life to go beyond control and managing to avoid deficits, and move towards a focus on human capital, where an engaged and balanced workforce can be promoted. This belief is thus at the very heart of positive organizational psychology.

2.1.1 COR theory

COR theory (Hobfoll, 1989) is regarded as one of the most influential stress and well-being theories. Even though it is not work-specific, it has been widely adopted in organizational psychology during the last three decades (Hobfoll et al., 2018). The basic tenet of COR theory is that human survival and

development depend on the acquirement and conservation of resources. According to COR theory, key resources are universal, which means that they pertain to those things in life that are centrally valued by all individuals, such as well-being, family, and meaning in life. How these central values are expressed differs by culture and context, but they always constitute the same core elements. Hobfoll's (1989) definition of resources as things that people value has been criticized for its vagueness (e.g., Gorgievski et al., 2011; Thompson & Cooper, 2001). Therefore, resources are instead commonly defined as "anything perceived by the individual to help attain his or her goals" (Halbesleben et al., 2014, p. 1338) in recent COR theory-based organizational literature.

Although COR theory posits that resource loss impact the individual more than resource gain, both events are important. A situation becomes stressful for individuals when they risk, or already face, a loss of key resources, or when they make substantial efforts to gain key resources but fail to do so. Resourceful workers, families, and organizations, in turn, rely on their capability to manage stressful situations as key resources can be employed to buffer against the negative effects of stress or be sustained for times of future need. Ultimately, individuals can find themselves in either a resource loss or gain spiral, as those who have lost resources are in a weaker position, while those who have gained resources are in a better position, to invest in and gain new resources. COR theory emphasizes that both resource loss and gain take place across the lifespan (Hobfoll et al., 2018). More recent and often applied theories in positive organizational psychology research stem from COR theory, such as the JD-R model (Demerouti et al., 2001) presented below, and the work-home resources model (ten Brummelhuis & Bakker, 2012).

2.1.2 The JD-R model

The JD-R model (Demerouti et al., 2001) offers a work-specific, resource-based theoretical perspective on mental well-being at work. The JD-R model proposes that there are two different but interrelated psychological pathways, referred to as the health impairment process and the motivational process, underlying mental well-being at work.

Job demands, commonly categorized into quantitative (e.g., work overload), emotional (e.g., sexual harassment at work), physical (e.g., lifts), and cognitive demands (e.g., multitasking), play a central role in the health impairment process. Job demands are aspects of the work that require much effort of workers and are associated with high physical or psychological costs. High

work pressure, emotional demands, and work overload are examples of job demands. In cases where the demands exceed the workers' capacity to adapt, they can exhaust workers, deplete their energy, and present them with health problems and strain. Job resources, in turn, play a central role in the motivational process. Job resources pertain to aspects of the work that have motivational potential, they can induce intrinsic motivation, by stimulating worker growth, learning, and development, or they can induce extrinsic motivation, by helping workers to achieve their work goals. Moreover, job resources have the potential to buffer against the negative effects of job demands. Job resources can reside in the workers' organizational (e.g., compensation, career opportunities, job security) or social context (e.g., supervisor and social support, team climate), or be afforded by the way work is organized (e.g., role clarity, involvement in decision-making) or the way tasks are designed (e.g., autonomy, skills variety, task identity). Also, the inclusion of personal resources, such as self-efficacy, self-esteem, and optimism, has been described as an important addition to the model (Bakker & Demerouti, 2007). Personal resources are inherent in the individual workers, and in similarity to job resources, they possess motivational potential (Xanthopoulou et al., 2007).

2.2 Health promotion

This thesis was influenced by the theoretical framework of health promotion as well. Health promotion and positive psychology share many commonalities. For example, both highlight the positive aspects of mental well-being, regard resources and potential as central concepts, and emphasize lifespan development. Health promotion in general, and the settings approach and the salutogenic model in particular, are presented below.

Like the psychology discipline, the health promotion discipline has witnessed an expansion during the last decades, going beyond the traditional focus on illness and risk factors to also include a focus on factors that support and protect well-being and quality of life (Chu et al., 2000). This new paradigm centers around human qualities and life skills, including productive and fruitful working (WHO, 2001; Jané-Llopis et al., 2005).

The settings approach (Poland et al., 2000) is widely applied in health promotion research, in which well-being is viewed to be created in peoples' everyday settings (WHO, 1986), and promoted by empowering them to participate in decisions relevant to their lives so that they can influence both individual and contextual well-being determinants (WHO, 1986; Nutbeam,

1998). The settings approach is holistic and integrative, addressing both individual factors and the overarching, contextual issues. The workplace is viewed to offer an ideal setting to promote well-being of a large share of the population, not only that of workers but also of their families and communities, as well as of the wider society (Chu et al., 2000; Torp et al., 2014; Eriksson et al., 2017).

In line with this view, Chu et al. (2000) notes that workplace health promotion, including the sub-domain mental health promotion, has reoriented from an emphasis on wellness activities directed to the individual, to collective endeavors involving both workers and management to create health-promoting workplaces. Similarly, Schulte & Vainio (2010) and Day & Nielsen (2017) describe a development in which the traditional focus on occupational safety and health has been expanded to also include an understanding and assessment of those factors that lead to healthy, happy, and productive workers. Further, they regard this shift necessary to address mental well-being and productivity at work effectively (Schulte & Vainio, 2010; Day & Nielsen, 2017). Likewise, Zwetsloot & Pot (2004), have argued that there is strategic value in the promotion of mental well-being at work, with investments in mental well-being promotion substantially impacting workforce productivity and engagement.

2.2.1 Salutogenesis

Antonovsky (1987) has through salutogenesis provided the field of health promotion with a solid theoretical foundation. Salutogenesis describes how different resources support health development and can be applied at different levels, such as the individual, organizational, and societal level. Health is regarded a movement in a continuum on an axis, in which one end point denotes ill-health (i.e., disease) and the other total health (i.e., ease). Even though various theories and concepts have been influenced by salutogenesis as a movement, the core concepts of the original salutogenic model constitute generalized resistance resources (GRRs) and sense of coherence (SOC) (Antonovsky, 1996).

GRRs enable the health movement and are resources internal (e.g., knowledge) and external (i.e., social support) to the individuals. The key issue is not the type of resource, rather, it is about the individuals' ability to use and re-use it for a certain objective. SOC is about how individuals view their life and their capacity to handle stressful situations, consisting of three components. The first component is comprehensibility. It is cognitive and refers to the

individuals' ability to make sense of what they encounter, perceiving stimuli as predictable, ordered, and explicit. Manageability, the second, behavioral component, pertains to the individuals' perceptions of whether resources at their disposal adequately meet the demands that they are presented with. The third component, meaningfulness, is motivational and refers to individuals' ability to make sense of their emotions and regard life as meaningful.

The salutogenic model advocates a dynamic view whereby SOC can be developed across the whole lifespan (Lindström & Eriksson, 2005). Several prominent scholars contributing to the field of mental health promotion have been influenced by the salutogenic model, all advocating a holistic approach to support and protect mental well-being (e.g., Keyes, 2014; Koelen et al., 2017; Barry & Jenkins, 2007). Given that work is a focal part of most individuals' life, working conditions are important determinants of their SOC and well-being, as well as their family's and society's well-being. In his work on the salutogenic model and SOC, Antonovsky (1987) thus considered both the negative and the health-promoting consequences of work characteristics. Health-promoting, salutogenic work characteristics can be understood not solely as buffering against the pathogenic effects of work stressors, but as having a distinct effect on positive well-being outcomes (Jenny et al., 2017). The bottom line, according to Antonovsky (1987), is that work is salutogenic when it is comprehensible, manageable, and meaningful, and this view has been adopted by many others (Nilsson et al., 2012; Vaandrager & Koelen, 2013; Jenny et al., 2017).

2.3 Work engagement and work-life balance as key aspects of mental well-being at work

In this thesis, specific attention was paid to two aspects of mental well-being at work, that is, work engagement and work-life balance. Not only are work engagement and work-life balance valued by and motivating for individual workers, but they also have far-reaching implications for organizations and by extension society at large.

Previous research makes clear that when workers are engaged, they are energized and focused, thereby bringing their full potential to work. This enhances the quality of their core work tasks. In addition, engaged workers are proactive, which means that they go beyond their formal role descriptions to make sure their efforts adapt to the changing landscape of work (Leiter & Bakker, 2010), thus being regarded as a key aspect of mental well-being at work in contemporary working life (Mäkikangas et al., 2016). For example,

work engagement reduces health-related problems, in terms of burnout, anxiety, and depression (Gonzalez-Roma et al., 2006; Schaufeli et al., 2008) and is closely associated with productivity outcomes such as work performance (e.g., Bakker & Bal, 2010; Christian et al., 2011) and financial return (Xanthopoulou et al., 2009a).

At the same time, organizations have started to realize that juggling the demands of work and family is part of the everyday life for a large share of the contemporary, diverse workforce. In addition, work and personal life is increasingly inseparable, as work is becoming more boundaryless and flexible. Work-life balance is associated with important outcomes, such as job performance (Talukder et al., 2018) and health (Lunau et al., 2014; Antai et al., 2015) at the individual level, performance at the organizational level (Beauregard & Henry 2009), and fertility rates and labor size at the societal level (Brough et al., 2008). Taken together, work-life balance is increasingly regarded another central aspect of mental well-being at work. At the individual level, this is reflected in boundary management preferences for either segmentation or integration (Kossek et al., 2012; Kreiner et al., 2009). At the organizational level, this is visible in increased work-life initiatives to support workers across the life course (Ropponen et al., 2016). At the societal level, this is expressed in policies, such as work-life balance being regarded an EU policy priority (European Parliament, 2019).

There is an interesting dynamic between work engagement and work-life balance, as the contemporary worker faces increased demands of engagement in both work and personal life responsibilities. By including both these key aspects of mental well-being at work, this thesis thus contributes to an important area of investigation.

2.3.1 The concept of work engagement

Engagement has been conceptualized, defined, and measured in different ways (for reviews, see Bailey et al., 2017; Shuck et al., 2017; Kelders et al., 2020), starting with Kahn's (1990) seminal paper on "personal engagement" at work. However, in this thesis, engagement is conceptualized as work engagement. Not that long ago, work engagement emerged as a concept in occupational health psychology (Bakker et al., 2008). Since then, an exceptionally strong consensus has been reached regarding its definition and measurement. Work engagement is commonly defined as a positive, psychological state consisting of the three subcategories vigor, dedication, and absorption (Schaufeli et al., 2002). While vigor refers to the worker's energy, resilience, and willingness to

work hard, dedication denotes the worker's enthusiasm and commitment to work, and absorption the worker's concentration and focus on work tasks, i.e., "flow". Not only has the Utrecht Group provided this widely accepted definition, but also the extensively adopted measurement scale (Utrecht Work Engagement Scale [UWES]; Schaufeli et al., 2006). Although some researchers (e.g., Wefald et al., 2012) have criticized this scale, its validity and reliability are supported by a strong evidence base (Schaufeli, 2014). As such, the work engagement research domain is considered mature in these two respects.

2.3.2 The concept of work-life balance

Work-life balance has its origins in sociology (Hildebrandt & Littig, 2006) and can be used as an umbrella term encompassing several concepts related to the work-life interface (Brough et al., 2020). This conceptualization will be used in this thesis except for when a more specific concept is perceived to better describe the phenomenon in question.

Early research on work-life balance paid nearly undevoted attention to the work and family domains. First, the negative aspects were studied, usually conceptualized as work-family conflict (Greenhaus & Beutell, 1985). Sometime later, the positive aspects were explored as well, usually conceptualized as work-family enrichment (Greenhaus & Powell, 2006). These two concepts are still used by many researchers when studying how the multiple life domains of an individual are either conflicting or enriching each other; however, the bidirectionality of the concepts is increasingly emphasized in contemporary literature (Casper et al., 2013). For example, with regards to work-family conflict, a growing evidence base suggests that family interference with work, i.e., family-work conflict, and work interference with family, i.e., work-family conflict, are related but distinct concepts (Mesmer-Magnus & Viswesvaran, 2005; Grandey et al., 2005; Ford et al., 2007). During the past two decades, a myriad of concepts has been discussed, such as work-family integration and segmentation, work-home conflict, work-life reconciliation, and work-life balance (for reviews, see Casper et al., 2013; Ropponen et al., 2016; Allen & Martin 2017; Brough et al., 2020). Among the more recent concepts, however, work-life balance has gained extraordinary much ground in academic literature and the popular press alike (Brough et al., 2020; Casper et al., 2018).

There are many reasons to why researchers often describe issues related to the work-life interface using the concept work-life balance. First, work-life balance refers to the overall satisfaction with the balance between work and personal life (Mellner et al., 2014). As work-life balance allows for a holistic

approach, it is different from more specific concepts such as conflict and enrichment (Greenhaus & Allen 2011; Valcour 2007; Voydanoff 2005). Second, while family remains a valid and important life domain, the connotation of work-life balance is more inclusive than that of work-family balance. Workers may wish to feel satisfied with how they can combine work and other areas of their life regardless of their current family situation (e.g., Kalliath & Brough, 2008; Keeney et al., 2013). Finally, by using this broader approach, less assumptions are being made about what is prioritized and valued by individuals in their personal life (Keeney et al. 2013).

3 Previous research

3.1 Underlying factors of work engagement and work-life balance

A breadth and depth of studies have examined underlying factors of work engagement and work-life balance respectively. Some underlying factors have been attracting great interest among both work engagement and work-life balance scholars, while others have attracted more interest either in the knowledge field of work engagement or that of work-life balance. Key findings reported in prior studies are summarized below.

3.1.1 Underlying factors of work engagement

Underlying factors of work engagement have been identified at multiple levels, including psychological, background, psychosocial, and socio-economic factors.

At the psychological level, much research has been directed to the influence of psychological resources (often referred to as personal resources) on work engagement. This especially pertains to psychological capital, which consists of four components: self-efficacy, optimism, hope, and resilience (Luthans et al., 2007). A commonality of these four components which brings them together into the psychological capital concept is that they help workers to flourish and succeed across situations. Sweetman & Luthans (2010) discussed the conceptual relations between psychological capital and work engagement and suggested that they are positively associated. This association is supported by several empirical studies, which additionally have demonstrated that the association is mediated by work empowerment and positive emotions (e.g., Avey et al., 2008; Joo et al., 2016).

In addition to psychological capital, the associations between a few other psychological resources and work engagement have been studied. For example, in an American cross-sectional study on nurses, a positive association was identified between mattering and work engagement (Haizlip et al., 2020). Another study from the Netherlands, which was longitudinal and conducted in an electrical engineering and electronics company, demonstrated that in addition to optimism and self-efficacy (i.e., two components of psychological capital), organization-based self-esteem was associated with work engagement (Xanthopoulou et al., 2009b). Further, a quantitative review conducted by Christian et al. (2011) showed that work engagement is positively associated

with personality traits in terms of conscientiousness, positive affect, and proactive personality. These positive associations were later supported by Young et al. (2018) in a meta-analysis of personality and work engagement, who additionally highlighted the important role of extraversion for work engagement. Young et al. (2018) also demonstrated negative, albeit weak, associations between work engagement and neuroticism as well as between work engagement and negative affect.

The role of background factors has been given limited attention in previous research on work engagement. For example, the association between gender and work engagement remains unclear. In a scale validation study based on large-scale data from ten countries, Schaufeli et al. (2006) found no associations between the variables in three countries and weak associations in seven countries. Among the countries where weak gender differences were found, men were found to be slightly more engaged than women in four, whereas the reverse was true in three countries. In addition to the role of gender for work engagement, Schaufeli et al. (2006) examined the role of age for work engagement and found a positive association, even though they regarded it too weak to hold practical relevance. The positive but weak association between age and work engagement has been supported in subsequent studies, meaning that older workers tend to be slightly more engaged than younger workers (e.g., Ramos et al., 2016; Lepistö et al., 2018).

Regarding previous research on psychosocial factors of work engagement, most studies have concentrated on factors in the psychosocial work setting. With regards to experienced job demands and resources, negative but weak associations between work demands and work engagement are generally reported while the associations between job resources and work engagement generally are positive and stronger. For example, in a longitudinal study, Hakanen et al. (2008) examined Finnish dentists and found a weak negative association between work engagement and job demands, in terms of quantitative workload, work contents, and physical work environment. Further, perceived job resources, in terms of task variety, social support at work, and feedback, were found to be positively associated with work engagement. In a cross-country study, Saari et al. (2017) found that job insecurity, time pressure and mental stress, decrease work engagement among both Finnish and Russian workers. Perceived job resources (e.g., job control, team spirit, and satisfaction with leadership), especially the opportunity to learn new skills at work, were positively and strongly associated with work engagement in both countries.

Comparing call center workers with workers representing other service sector work in Finland, Mustosmäki et al. (2013) found that the negative association between job demands, including work pace, conflicting demands, and time pressure, and work engagement is especially strong among call center workers, suggesting that differences exist across industries. They also found that the perceived job resources work autonomy and social support were strongly associated with work engagement. A comparative study spanning samples from eight European countries examined the same job demands and job resources as Mustosmäki et al. (2013) and found that perceived job demands were negatively associated with work engagement, but only in four of the included countries (Taipale et al., 2011). With regards to perceived job resources, positive associations with work engagement were found across all eight countries. The findings from these single studies on psychosocial factors in the work setting and their associations with work engagement are supported by several meta-analyses (Christian et al., 2011; Halbesleben, 2010; Crawford et al., 2010). Finally, perceived job resources have been found to buffer against the negative influence of perceived job demands on work engagement, particularly when job demands are high (e.g., Bakker et al., 2007).

A few prior studies have examined the role of socio-economic factors for work engagement, although these remain very limited. For example, Cahill et al. (2015) examined the extent to which various worker outcomes, including work engagement, were influenced by changes in the macro-economy. The study was based on a sample from nine large and US-based organizations and included macro-economic factors such as unemployment rates, a house price index, and a stock index. It was shown that a positive association exists between overall macro-economic performance (i.e., a strong economy) and work engagement, but not when controlling for the other included factors. When all factors were included, work engagement improved when there were positive changes in the economy.

Further, cross-country differences exist with regards to the underlying factors of work engagement, as noted in the aforementioned study by Taipale et al. (2011). The study by Taipale et al. (2011) was focused on factors in the psychosocial work setting and work engagement. The discovered cross-country differences indicate that socio-economic factors may underlie work engagement although these were not explored in the study. Similarly, in a large-scale study conducted by Schaufeli (2018), it was demonstrated that there existed differences in work engagement across countries (the analysis included 35 countries). For example, while the most engaged workforces were found in

Northwestern European countries, the least engaged were found in Southern European and Balkan countries as well as in Turkey. Remarkable low levels of work engagement were also found in Germany.

Going beyond the notion that cross-country differences exist, however, Schaufeli (2018) showed that economic, governance, and cultural factors to varying degrees indicate work engagement at country level. For example, the workforce tends to be more engaged in well-governed countries, characterized by a strong democracy, gender equality, and integrity. Among the cultural factors, the level of individualism was most influential and contributed to an engaged workforce. In addition, cultural factors such as low power distance and uncertainty avoidance were positively associated with work engagement. However, it was concluded that the most important factor for enhanced work engagement at the country level was productivity, i.e., an economic factor.

To conclude, work engagement research is substantially less informed about the influence of socio-economic factors than about the influence of psychological, background, and psychosocial factors in the work setting. This is an important knowledge gap, as work engagement is likely to be shaped by factors outside the individual and its immediate work setting, such as factors in the socio-economic context and related historical, social, and economic developments (Bambra & Eikemo, 2009). Studies that go beyond the work setting and consider broader, contextual factors are thus warranted to increase the effectiveness of research and practice aimed at promoting work engagement.

3.1.2 Underlying factors of work-life balance

Similar to work engagement, work-life balance outcomes can be influenced by psychological, background, psychosocial, and socio-economic factors.

Several psychological resources have been found to underlie work-life balance outcomes. For example, in a US-based study including two samples, academic scientists and full-time workers, it was found that organization-based self-esteem has a positive association with both work-life conflict and work-life enrichment. However, no associations were found between organization-based self-esteem and life-work conflict respectively life-work enrichment for the academic scientist sample (Gordon & Hood, 2021). Further, research generally has demonstrated positive links between psychological capital and work-life balance. For instance, in a longitudinal study, Siu (2013) demonstrated that all four individual components – self-efficacy, optimism, hope, and resilience – were positively associated with work-life balance in a

Chinese sample from the health care sector. Similarly, Chan et al. (2016) discovered that self-efficacy in terms of regulating work and life was positively associated with work-life balance. In other words, the study demonstrated that those who were more likely to believe in their own ability to maintain a balance between work and non-work demands also tended to report higher levels of experienced work-life balance.

Further, in a study on the associations between personality traits and work-life balance outcomes among full-time parents in India, it was found that proactive personality and neuroticism both are weakly related to work-life balance, in that the former has a positive and the latter a negative association with work-life balance (Aryee et al., 2005). Similarly, Wayne et al. (2004) reported a weak, negative association between neuroticism and work-family facilitation in a random sample of employed US workers. However, in the study conducted by Wayne et al. (2004) strong associations were found between extraversion, agreeableness, and conscientiousness and family-work facilitation, as well as between agreeableness and work-family facilitation.

A few background variables should also be mentioned as underlying factors of work-life balance examined by previous research. For example, single parents with a low education level have been discovered to experience the lowest levels of work-life balance due to severe conflicting demands between work and personal life (Montez et al., 2014).

Further, gender and age both have generally been weakly associated with work-life balance outcomes. In a meta-analysis on the underlying factors of work-family conflict, men tended to report slightly more work interference with family (WIF), while women tended to report slightly more family interference with work (FIW), but the differences between men and women were small with regards to both WIF and FIW (Byron, 2005). Similarly, little evidence for substantial gender differences in work-family conflict were found in a more recent meta-analysis. Overall, there were more similarities than differences in work-family conflict experienced by men and women (Shockley et al., 2017). With regards to age, Crompton & Lyonette (2006) showed that younger full-time workers reported lower work-life balance than older full-time workers in a sample constituting workers from five European countries. Similar findings were reported by Spieler et al. (2018) in two different samples, of which one was cross-sectional and derived from the banking industry, and the other was based on diary entries and constituted workers from different sectors. Further, based on their findings they suggested that older workers'

higher levels of work–life balance primarily can be explained by more successful boundary management with age.

However, most research on the underlying factors of work-life balance has focused on psychosocial factors in the work setting. The existing evidence generally has demonstrated that job demands have a negative association with work-life balance, while job resources consistently have been found to have a positive association with work-life balance. For example, a cross-national study on full-time workers spanning samples from four countries showed that job demands in terms of task overload and a high number of working hours were negatively associated with work-life balance, while job resources in terms of job autonomy and supervisor support were positively associated with work-life balance (Haar et al., 2019). Similar to what has been found in studies on work engagement (e.g., Bakker et al., 2007), Haar et al. (2019) also found that job resources mitigated the negative influence of job demands on work-life balance. Time pressure has also been identified as a factor with a negative influence on work-life balance, for example in a German study based on samples from several information technology organizations (Syrek et al., 2013). Similar to Haar et al. (2019), Syrek et al. (2013) found that a job resource, transformational leadership, reduced the negative influence of time pressure on work-life balance.

Further, in an integrative review on work-life balance, Sirgy & Lee (2018) identified a range of job demands and job resources with negative respectively positive influences on work-life balance. In addition to time pressure, role ambiguity was for example identified as a job demand with a negative association with work-life balance, and scheduling flexibility, autonomy, and social support were identified as important job resources positively associated with work-life balance. Co-worker support was highlighted as a key source of support for work-life balance in an American study on full-time workers with working partners (Ferguson et al., 2012). In a comprehensive meta-analysis focusing on the associations between social support and work-family conflict, it was further revealed that broad sources of support generally are more strongly and negatively associated with work–family conflict than are specific sources of support, with organizational support emerging as the most important source of support (French et al., 2018).

Psychosocial factors in the family setting have also been examined to some extent in the work-life balance literature, even though to a lesser extent than have those in the work setting. Compared to work-related factors, family-related factors also generally have demonstrated weaker associations with

work-life balance (Brough et al., 2020). When it comes to family-related factors, family involvement and caring for children are examples of factors with a negative influence on work-life balance outcomes. In a highly cited study by Adams et al. (1996), family involvement was found to have a negative influence on FIW. However, this finding could not be corroborated by the evidence presented in an ample meta-analysis on the antecedents of work-family conflict (Byron, 2005). Because the most intensive career-building and child-rearing years tend to coincide, caring for children and especially young children has been identified as a factor that can increase work-family conflict (Wepfer et al. 2015). The study by Haar et al. (2019) included not only work-related but also family-related factors and found that family demands were negatively related to work-life balance. Turning to family-related factors positively influencing work-life balance, alongside co-worker support, the aforementioned study by Ferguson et al. (2012) included partner support and found that it played a significant and positive role for experienced work-life balance. In addition, family support has emerged as a social support factor in the family setting demonstrating significant positive associations with work-life balance. For example, Russo et al. (2016) arrived at this conclusion when they examined workers in the industrial sector and physicians in public hospitals alike.

The evidence-base of socio-economic factors underlying work-life balance is small but growing. For example, a literature review by Powell et al. (2009) showed that few prior studies have incorporated cultural factors into the analysis of work-life balance outcomes. The study by Lyness & Kropf (2005) forms one exception, in which working managers from 20 European countries were included. In measuring the cultural dimension of gender equality at the national level, Lyness & Kropf (2005) found that it was related to work-life balance through perceived organizational work-family support. Further, in the previously mentioned study conducted by Cahill et al. (2015), not only work engagement was included as a worker outcome, but also work-life balance. With regards to work-life balance, Cahill et al. (2015) found that a strong economy reduced work-life balance, which was explained by a heavy focus on career opportunities of workers in stronger economies. Cross-country differences in work-life balance have also been identified. For example, the aforementioned study by Haar et al. (2019) found that parental status had a significant positive association with work-life balance in France and Italy, while this association was non-significant in New Zealand and Spain. Similarly, Lunau et al. (2014) compared supportive work-life balance policies across European

welfare regimes and found that the highest levels of work-life balance were reported in Scandinavian countries (Lunau et al., 2014).

In sum, work-life balance research is fairly well-informed about the influence of psychological, background, and work-related psychosocial factors (Brough et al., 2020). In contrast, less research has been conducted on the role family-related psychosocial factors play for work-life balance (Brough et al., 2020), as well as how workers' experiences of work-life balance are shaped by cultural, economic, and national contexts, as noted by, for example, Ollier-Malaterre & Foucreault (2017), Powell et al. (2009), and Cahill et al. (2015). To better understand the multifaceted underlying factors of work-life balance, there is thus a pressing need for work-life balance research to explore factors outside the work setting, such as factors in the family and socio-economic settings.

3.2 The association between work engagement and work-life balance

Previous research makes clear that work engagement and work-life balance are related. As evident from the literature review presented above, they share several underlying factors at the individual (e.g., psychological capital), psychosocial (e.g., social support), and socio-economic level (e.g., economic situation). Further, it is generally agreed that both work and personal life require a great deal of time, energy, and effort. In line with this, it is not surprising that prior studies have established that a worker's personal life impacts its work engagement, and the other way around (Halbesleben, 2010; Timms et al., 2015). However, thus far results are inconclusive regarding whether the association between work engagement and work-life balance is negative or positive (Wood et al., 2020). Those demonstrating a negative association have drawn upon a role strain perspective and have suggested that work and family demands are incompatible due to limited time and energy (Greenhaus & Beutell, 1985). According to this perspective, engagement in one role requires disengagement in another (Montgomery et al., 2003). Conversely, those demonstrating a positive association have adopted a role enrichment perspective and have assumed that positive experiences and affect in one role can increase engagement in other roles (Rothbard, 2001). According to this perspective, work-life balance thus promotes work engagement (Niessen et al., 2018; Haar et al., 2019).

Taken together, this interesting dynamic between work engagement and work-life balance calls for further investigation, and especially for studies in which overarching and broader contextual factors are accounted for, as these can be regarded the black box of both work engagement and work-life balance.

3.3 Interventions aimed at promoting mental well-being at work

3.3.1 What is an intervention aimed at promoting mental well-being at work?

It is not an easy task to define what an intervention aimed at promoting mental well-being at work is. First, interventions taking different forms, such as leadership development programs, team-building trainings, or healthy-life style initiatives, all have the plausibility to impact mental well-being at work, regardless of whether this was the intended intervention effect or not. Also, as discussed above, the term mental well-being at work includes a wide variety of phenomena. Due to this reason, most interventions intended to promote mental well-being at work are likely to impact mental well-being at work in some way but none with regards to all aspects. If the intervention is conducted in the workplace setting, it can also be challenging to distinguish the effect of work-related from non-work-related factors (such as family or socio-economic factors) on mental well-being at work. Further, among those interventions explicitly aimed at impacting mental well-being at work, both those primarily aimed at preventing ill-being (e.g., individual stress management interventions) and promoting well-being (e.g., resource-developing interventions) can be found. At minimum, however, researchers seem to agree that an intervention aimed at promoting well-being at work involves a planned, theory-based action, which is conducted either to remove or modify the causes of stressors at work or to improve the well-being of workers (e.g., Nielsen et al., 2010; Torp et al., 2011; Briner & Walshe, 2015).

The research interest in interventions aimed at promoting mental well-being at work has increased lately, both in the field of positive psychology and in the field of mental health promotion. Researchers representing both fields usually make a rough distinction between mental well-being interventions taking a top-down and a bottom-up approach. Whereas top-down interventions are initiated and driven by senior management, often with the intention to create organization-wide effects, bottom-up interventions emphasize worker participation and empowerment as they are driven by

individual workers and aim to make changes that have effects on themselves and their immediate work environment (Hanson, 2007; Hornung et al., 2010). However, researchers representing these two different fields have different starting points, concepts, and theories that they draw on when conducting intervention research. For example, positive organizational psychology interventions tend to center around the individual, while workplace health promotion interventions emphasize the role of physical, social, and organizational factors. Thereby it may be useful to shortly present the intervention research in both fields before discussing the effect of interventions specifically aimed at promoting work engagement and work-life balance.

3.3.2 Positive organizational psychology interventions

In line with how positive psychology has been defined by Seligman & Csikszentmihalyi (2000), a positive psychology intervention applied to the organizational context can be defined as any intentional activity or method aimed at 1) promoting valued subjective experiences or 2) positive individual traits of workers, or 3) valued organizational characteristics (Meyers et al., 2013). The first type of positive psychology interventions, i.e., interventions aimed at promoting valued subjective experiences, includes gratitude interventions, positive writing, mindfulness, and psychological capital interventions. The second type of interventions, those focusing on positive individual traits of workers, are strength-based interventions. The third type of interventions is the most uncommon and focuses on valued organizational characteristics, such as interventions using the appreciative inquiry approach where an organization's most vital strengths are identified and used to attain organizational goals. Positive psychology interventions in the organizational context may have various desired effects, such as the promotion of retention, performance, or leadership skills. However, many of these interventions have indeed been focused on the promotion of mental well-being at work.

Further, a growing number of scholars contributing to the field of positive psychology in the organizational context argue that organizations increasingly must rely on employees' proactive behavior and engagement as working life is becoming more dynamic and organizations have less time to create resourceful work environments for their employees (e.g., Grant & Ashford, 2008; Bakker, 2017). Top-down interventions remain important to promote mental well-being at work, but workers should be regarded as active actors in the organizational context as well. Consequently, it has been suggested that

organizations can facilitate and support employees in creating a resourceful environment for the promotion of mental well-being at work by offering interventions in which employees learn, practice, and implement individual bottom-up strategies, such as self-management, job crafting, strengths use, and mobilizing ego resources (Bakker, 2017). Although to a varying degree, all these individual, bottom-up approaches can be related to positive organizational psychology.

3.3.3 Workplace health promotion interventions

In line with the settings approach, it has been argued that health promotion activities should focus on changing aspects of the setting rather than solely changing aspects of workers' behavior that can be related to their well-being. Further, these changes should be conducted in a holistic manner, applying a salutogenic and system-oriented thinking. However, it is important to recognize that health promotion activities may be carried out in a setting without being defined as health promotion applying a settings approach (Torp et al., 2011).

In a review by Whitelaw et al. (2001), five models of health promotion activities in settings were distinguished based on how problems and solutions were identified. Applied to the workplace setting (see e.g., Torp et al. 2011), the problem rests within the individual behavior and action of workers in the first two models: the passive and active models. The workplace setting is passive in the first model, as it only provides access to the workers and the intervention takes place regardless of the workplace features. The solution is thus also found within the individual workers in this model. The workplace setting is active in the second model as it provides comprehensive resources to fulfill health promotion goals. Therefore, at least some of the solution lies in the workplace setting according to this model. In the three following models, the vehicle, organic, and structural models, the problem, in turn, is viewed to lie in the workplace setting. In the vehicle model, health promotion activities are regarded as a vehicle for a broader setting development, and the solution lies in learning from individually based projects. Processes at the workplace setting involving worker participation (in the organic model) and structural and cultural aspects of the workplace setting (in the structural model) are inherently linked to mental well-being at work and are thus regarded health-promoting in the final two models. However, while the solution is in the actions of the individual workers in the organic model, it resides in the setting in the structural model, as health promotion is regarded as a central component of

comprehensive setting development. According to Tones & Green (2004) the last two models are most aligned with health promotion applying a settings approach.

Further, empowerment, that is, when workers gain mastery over their own working life and demographic participation at the workplace, is essential in workplace health promotion (Zimmerman & Rappaport, 1988). Workers are regarded as active actors who know what is best for them if they are empowered by a resourceful environment. Therefore, workplace health promotion interventions should be about changing the surrounding work environment and structures rather than solely about changing individual behavior and action (Askheim, 2007; Torp et al., 2011). This bottom-up approach is considered to sustain and maintain a healthy workforce by promoting workers to participate in decision-making and empower them to take control over their own work situation (Hanson, 2007).

3.3.4 Intervention impacts on work engagement

A few years back, three ample reviews of work engagement were published (Bailey et al., 2017; Knight et al., 2017/2019). In all three reviews, the authors refer to the JD-R model as the most common theoretical framework that the included interventions draw upon, together with the definition and scale provided by the Utrecht Group. Extraordinary agreement regarding these essentials seems to exist among work engagement researchers, which has allowed the field to progress quickly. The review by Bailey et al. (2017) was a narrative synthesis of the engagement literature, including an overview of the intervention research. They identified nine interventions of which six demonstrated effectiveness (Bailey et al., 2017). The first review by Knight et al. (2017) included all kinds of work engagement interventions and identified 20 interventions. In the second review by Knight et al. (2019), 40 interventions could be identified, reflecting the rapidly increasing evidence-base of work engagement interventions.

The first review by Knight et al. (2017) included a meta-analysis of overall and specific aspects of work engagement (vigor, dedication, an absorption). They concluded a small, but positive intervention effect on overall work engagement. Interventions were categorized according to how they were carried out, in groups, individually, online, or using both group and individual methods, with group interventions proving most effective (e.g., Biggs et al., 2014). However, due to the relatively few interventions in some subgroups (for example, only one intervention categorized as “individual” could be included in

the core meta-analysis of overall work engagement (i.e., Naruse et al., 2015), the validity of the results could be questioned. The interventions were also categorized based on their focus, resulting in four categories: personal resource building (Ouweneel et al., 2013), job resource building (Coffeng et al., 2014), leadership training (Biggs et al., 2014), and health promotion (Strijk et al., 2013), but no moderation effects were found based on intervention foci.

The second, most recent review by Knight et al. (2019) was a systematic review. Building on their previous meta-analysis, they categorized the interventions according to focus. They identified five as personal resource building, twelve as job resource building, three as leadership training, and eighteen as health promotion. Additionally, a new type of interventions was identified, as two interventions focused on both job and personal resource building. According to the synthesis, half of the interventions were demonstrated to be effective. Bottom-up interventions were most successful, especially when the interventions were focused on job crafting and mindfulness. In comparison with their first review, they did not conclude that group interventions were the most effective ones, but rather interventions which contained both a substantial group and individual component.

3.3.5 Intervention impacts on work-life balance

Compared to work engagement interventions, there exist much fewer work-life balance interventions. In an overview of organizational interventions for balancing work and home demands, Brough & O'Driscoll (2010) identified 11 intervention studies published between 1987 and 2007, of which six had a randomized group design. A more recent systematic review of work-life balance interventions implemented by employing organizations revealed that nine intervention studies had been published between 2000 and 2015, of which five had a randomized group design (Ropponen et al., 2016). While Ropponen et al. (2016) considered the type of intervention according to the work-home resources model, identifying two interventions focusing on building work-related resources, six on personal resources, and one on both, Brough & O'Driscoll (2010) did not draw on any specific theoretical model to categorize the interventions.

In general, however, most work-life balance interventions can be categorized into one of four types (Harrington & James, 2006). According to the review by Ropponen et al. (2016), the most common intervention type is focused on organizational development or training, such as leadership training. Other types are focused on providing employed workers with parental benefits,

such as paid parental leave, on job restructuring, working time arrangements, and flexibility, such as telework, or on serving employed workers, such as fitness benefits. Ropponen et al. (2016) found that interventions focusing on flexible working time and other flexible arrangements (e.g., Albertsen et al., 2014) as well as supervisor support (e.g., Kelly et al., 2014) for family and personal life effectively promoted work-life reconciliation, and simultaneously positively impacted other well-being aspects of the workers, such as their physical health, stress levels, and job satisfaction.

Even though the above-mentioned intervention typology was recognized in the review by Brough and O'Driscoll (2010) as well, they narrowed their focus to three groups of interventions: working hours initiatives (e.g., Wilson et al., 2007), collaborative action research aimed at promoting workplace equity and performance (e.g., Egan et al., 2009), and initiatives to promote a work-life balance friendly organizational culture (e.g., Baily et al., 2006). The review by Brough & O'Driscoll (2010) demonstrated that the included intervention studies generally were effectively promoting work-life balance and additional aspects of well-being. Further, the review by Brough & O'Driscoll (2010) makes clear that a health-promoting workplace setting is impactful as some organizational cultures and contexts were regarded as more conducive than others for the promotion of work-life balance of workers and the development of work-life balance supportive policy and strategy work alike.

However, neither one of the reviews were able to provide a meta-analysis of the intervention effectiveness, due to the small number of existing intervention studies. Since these reviews were published, a few publications presenting interventions aimed at promoting work-life balance can be identified (e.g., Peeters et al., 2020; Delanoeije & Verbruggen, 2020; Koekemoer & Petrou, 2019). For example, Peeters et al. (2020) examined the effect of two positive psychological micro-interventions on work-life balance of working mothers, showing that the intervention focusing on personal resource use were effective while the intervention focusing on counting personal blessings was not.

4 Overview of the thesis

As described above, there is a rich evidence base on the prevention of mental health problems in terms of stress, anxiety, burnout, depression, and dissatisfaction at work (e.g., Seligman & Csikszentmihalyi, 2000; Seligman, 2002; Schulte & Vainio, 2010; Day & Nielsen, 2017). However, the changing landscape of work demands that increased attention is being paid to mental well-being at work as well as its support and protective factors (Schulte & Vainio, 2010; Day & Nielsen, 2017). Work engagement and work-life balance are two promising and, in many ways, inter-related sub-fields of research on mental well-being at work, to which the present thesis particularly contributes.

With regards to work-family conflict, an important aspect of work-life balance, its potential consequences are well-examined in previous international research. However, its support and protective factors and their relative associations to FIW and WIF are less explored, although this body of literature is continuously growing (French et al., 2018; Shockley et al., 2017; Allen et al., 2020; Liao et al., 2019). For example, it has been assumed that psychosocial work factors relate more to WIF than to FIW, while psychosocial family factors relate more to FIW than to WIF. While the former assumption seems to hold true (e.g., Michel et al., 2011; Byron, 2005; French et al., 2018), evidence for the latter is less conclusive (Michel et al., 2011; Byron, 2005; French et al., 2018). In addition, empirically driven studies seem to conclude that cross-domain influences exist (Michel et al., 2011; Byron, 2005; French et al., 2018; Ford et al., 2007; Michel et al., 2009).

In the international research debate on work-life balance, family life stages including the care of young, dependent children have been particularly highlighted, commonly referred to as “the ‘rush hour’ of life” (Klammer, 2010). The most intensive career-building and child-rearing years tend to coincide, resulting in a potential double-burden to workers in these family life stages (Wepfer et al., 2015). Therefore, the use of lifespan approaches, including a family life stage perspective, see e.g., Hill et al. (2008), can be helpful in the study of work-life balance and its support and protective factors. To the best of my knowledge, however, no Finnish study has adopted a family life stage approach in the examination of work-life balance and its support and protective factors.

Further, the term “gendered life-course” has been used to describe the differences between men and women in work biographies (Moen & Sweet, 2004). In most parts of the world, for men the norm is still continuous full-time

work, while the norm for women is part-time work or temporary unemployment during child-rearing years and few women ever go back to full-time employment (Wepfer et al., 2015). In Finland, in turn, there is an emphasis on full-time employment, meaning that both mothers' and fathers' full-time work is encouraged by e.g., heavily subsidized childcare (Pfau-Effinger, 2005). While this model promotes gender equality in the work setting and generally has resulted in high levels of work-life balance among Finnish workers in the past (Crompton & Lyonette, 2006; Mensah & Adjei, 2020; Matilla-Santander et al., 2019; Leitner & Wroblewski, 2006), gender differences may exist in the family setting, in terms of women carrying out unpaid work (i.e., domestic and care work) to a larger extent than men (Schulstok & Wikstrand, 2020). Gender equality in the family setting remains a largely untapped issue in Finnish – and in larger terms Nordic – research on work-life balance (Schulstok & Wikstrand, 2020).

Moreover, different welfare states approach work-life balance-related policies in distinct ways. Unfortunately, prior comparative research on both the positive mental well-being outcomes of work-life balance (such as work engagement) and the broader socio-economic context by which it is shaped is inconclusive, not least because most existing studies are based on a small number of countries with contradicting results (Wood et al., 2020), and because these often study variations in work-life imbalance rather than in work-life balance (e.g., Lunau et al., 2014). Thus, even though previous country-level studies have demonstrated an association between work-life balance and work engagement, it remains unexplored whether this association can be found in Europe while also accounting for between-country variance. Also unclear is whether work-life balance varies across European countries and whether this variance can be explained by welfare regime.

Finally, with regards to work engagement, a wide range of interventions is currently emerging. Especially, the increase of interventions taking a bottom-up approach is remarkable, responding to the argument that organizations increasingly must rely on employees' proactive behavior and engagement (e.g., Grant & Ashford, 2008; Bakker, 2017). However, it is unclear whether interventions aimed at promoting work engagement, in which employees themselves are encouraged to develop workplace resources, are effective. Therefore, this type of interventions is yet to be systematically reviewed and meta-analyzed.

Taken together, research, including research targeting the Nordic and European context, on the positive aspects of mental well-being at work and

how these can be protected and supported is much less common than that on mental health problems and its associated risk factors. Further, studies that take a holistic and integrative perspective, including not only psychosocial, but also overarching, contextual factors that can protect and promote mental well-being at work, are limited.

Therefore, this thesis not only adopted the theoretical perspective of positive organizational psychology but was also influenced by the theoretical perspective of workplace mental health promotion. This could further the evidence base on the positive aspects of mental well-being at work in general, and on work engagement and work-life balance in particular. Also, part of this thesis is concerned with how resources for sustained and promoted mental well-being at work can be developed from bottom up, which is in line with the strong Nordic traditions of democracy, empowerment, and participatory approaches at the workplace (Gustavsen, 2007; Arbeids og inkluderingsdepartementet, 2005).

5 Included studies

The present thesis constitutes four separate but interrelated studies. In these studies, various research methods were used to investigate mental well-being at work and how it can be promoted, specifically focusing on two aspects in terms of work engagement and work-life balance.

Study 1 examined the associations between FIW/WIF and selected psychosocial risk and support factors in the work and family settings of Finnish working families, utilizing cross-sectional, national interview survey data. Consequences of work-family conflict are well-examined in previous international research, while support and protective factors and their relative associations to FIW/WIF are less explored. Further, Nordic research in this field targeting ‘working families’ with young children, a very time-squeezed group, is especially warranted.

Based on the same data as Study 1, Study 2 explored the association between work-life balance, psychosocial work environment (work demands and social support at work), and family life stages, particularly paying attention to the situation of workers caring for young, dependent children. It remains underexplored whether the term “gendered life-course” applies to work-life balance in the Nordic work context. In addition, there is a lack of studies on work-life balance including both family life stage, social support, and work demands, also internationally. This study is thus warranted to provide organizations and societies with guidance on how to effectively support and protect work-life balance of workers in different family life stages.

Study 3 set out to respond to the question whether there is an association between work-life balance and work engagement across European welfare states, as well as whether work-life balance varies across European countries and whether this variance can be explained by welfare regime. The study was motivated by the scarcity of large-scale, comparative studies which have examined both the positive mental well-being outcomes (e.g., work engagement) of work-life balance and the broader socio-economic context by which it is shaped. In addition, results thus far are inconclusive regarding whether the association between work-life balance and work engagement is negative or positive, since the studies are based on single countries or single organizations using small samples.

Study 4 was a systematic review and meta-analysis examining the evidence base for the effectiveness of bottom-up, resource-developing interventions targeting employees in the promotion of work engagement. Both intervention

research and bottom-up approaches have increasingly been advocated in the specific research field of work engagement, and more generally in research on well-being at work. However, no systematic review and meta-analysis has been conducted on this specific topic, thus justifying the conduction of Study 4.

6 Study aims

The overall aim of this thesis is threefold: 1) to examine psychosocial factors that are associated with mental well-being at work, particularly with work engagement and work-life balance, 2) to examine whether these two aspects of mental well-being are associated, as well as 3) to gather the evidence base for the effectiveness of interventions focused on promoting work engagement by developing workplace resources from bottom-up. More specifically, the first part presents psychosocial factors in the work and family settings that promote and protect mental well-being at work. The second part describes the association between work engagement and work-life balance. The third part is practice-oriented, focusing on the effectiveness of interventions in which participants learn how to promote their work engagement by developing resources. The following specific aims of the included studies were formulated in relation to the overall aim (see also Table 1):

- to examine the associations between FIW/WIF and selected psychosocial risk and support factors in the work and family settings of Finnish working families (Study 1)
- to examine the association between work-life balance, psychosocial work environment (work demands and social support at work), and family life stage among Finnish working men and women, paying special attention to family life stages encompassing the care of young, dependent children (Study 2)
- to investigate the association between work-life balance and work engagement across a wide range of European welfare states, as well as to examine whether work-life balance varies across European countries and whether this variance can be explained by welfare regime, controlling for individual-level factors (Study 3)
- to conduct a systematic review and meta-analysis to synthesize the evidence base for the effectiveness of interventions focused on promoting work engagement by developing workplace resources from bottom-up (Study 4)

Table 1. Overview of the included studies.

Study	Aim	Design/ Method	Included variables	Analysis
1	To examine the associations between FIW/WIF and selected psychosocial risk and support factors in the work and family settings of Finnish working families	Cross-sectional survey study (QWLS 2018) Sample: 690 women, 741 men 284 (20–34 years) 659 (35–44 years) 428 (45–54 years) 60 (55–67 years)	-Work-family conflict (a single item measuring FIW; a single item measuring WIF) -Psychosocial risk and support factors (three work and three family demands factors, two work and two family support factors) -Socio-demographic and workplace characteristics (age, gender, educational level, temporal and spatial flexibility, employment type, number of subordinates, age of children)	Pearson's chi-square test Logistic regression analyses
2	To examine the association between work-life balance, psychosocial work environment (work demands and social support at work), and family life stage among Finnish working men and women, paying special attention to family life	Cross-sectional survey study (QWLS 2018) Sample: 1983 women, 1807 men	- Work-life balance (single-item) - Factors in the psychosocial work environment (work demands, social support at work) - Family life stage - Background factors (gender, employment status, cohabiting partner)	Logistic regression analyses, conducted separately for men and women

	stages encompassing the care of young, dependent children			
3	To investigate the association between work-life balance and work engagement across a wide range of European welfare states, as well as to examine whether work-life balance varies across European countries and whether this variance can be explained by welfare regime, controlling for individual-level factors	Cross-sectional survey study (EWCS 2015) Sample: 17897 women, 17498 men Mean age: 43.49 years (SD 11.95)	-Work engagement (UWES, 3-item, ultra-short version) -Work-life balance (single-item) -Welfare regime - Background factors (gender, age, cohabiting partner, cohabiting children, employment status, supervisory position, educational level, most significant contributor to household income)	Multilevel (linear and logistic) regression analyses, conducted separately for men and women
4	To conduct a systematic review and meta-analysis to synthesize the evidence base of interventions focused on promoting work engagement by developing workplace resources from bottom-up	Systematic review and meta-analysis Systematic searches in seven international, scientific online databases	-Author, publication year, quality appraisal -Design (study setting, UWES-version, quantitative design, qualitative design, foci, approach, format) -Key findings (on work engagement) -Quality appraisal (scores -, +, ++)	Systematic coding of key information (qualitative and quantitative) Meta-analyses

Notes: QWLS = Quality of Work Life Survey. EWCS = European Working Conditions Survey.

7 Pre-understanding

Pre-understanding inevitably impacts knowledge production (Gadamer et al., 2004). It is widely acknowledged that pre-understanding can be associated with risks of bias in research, for example stereotyping or use of a one-sided perspective, and other problematic pre-assumptions that have a negative influence on the study validity (Patton, 2002; Schmidt & Hunter, 2014; Alvesson & Sandberg, 2022). However, an active and systematic use of one's pre-understanding can also have a positive influence on the study process. For example, researchers can use their pre-understanding as a source of inspiration to think differently, to evaluate the relevance and novelty of the scientific production, and to enhance their interpretations and expand their perspectives in various phases of the research process (Alvesson & Sandberg, 2022). Drawing on the researcher's pre-understanding can be regarded to be especially fruitful in the present thesis adding to applied psychology (i.e., positive organizational psychology), as applied research warrants appropriate consideration of the research implications for the end user (Brough & Hawkes, 2019). In the present thesis, the end user are organizations and the society.

Thus, in the context of this thesis, it should be acknowledged that the researcher's own interest and knowledge in the fields of developmental psychology and management and organization could have both a negative and positive influence on the study process. The whole research process, including research questions, study design, analysis, contributions, and writing, is inevitably shaped by the researcher's pre-understanding of psychological and organizational theories and approaches. A risk of bias underlies this PhD thesis as all included studies have the same principal researcher, who has been strongly involved in all phases of the research process, except for data collection. However, close collaboration with the co-researchers during the whole research process has mitigated risks of bias, from formulating research questions to analyzing data and presenting the findings. Moreover, the research work which underlies all included studies has been carefully, systematically, and transparently documented and described so it can be replicated (Miguel, 2021). At the same time, the researcher has strived to make use of her pre-understanding about what is interesting and relevant to a broad readership to make the contributions of the thesis as impactful as possible (Brough & Hawkes, 2019; Alvesson & Sandberg, 2022).

8 Methods

The choice of study design was guided by the specific aims and research questions of the included studies. The present PhD thesis included three studies with a cross-sectional survey design (Studies 1–3) and one with a systematic review and meta-analysis design (Study 4). Please see Table 1 for an overview of the designs, variables, and analyses of the included studies.

8.1 Studies 1–3 – Interview survey studies

8.1.1 Data material

In Studies 1–3, data from two different population-based, cross-sectional interview survey studies were utilized. That is, Studies 1 and 2 were based on a national interview survey conducted in 2018, the Finnish Quality of Work Life Survey (QWLS 2018). Study 3, in turn, was based on a European interview survey conducted in 2015, the European Working Conditions Survey (EWCS 2015).

Surveys, including interview-based and self-administered questionnaire-based surveys, are a key source and in many cases the singular source of data for research on the determinants of well-being at work and elsewhere. For example, information on the perceived psychosocial working environment as well as associated support and protective factors in daily working life can only be revealed by surveys (Rasmussen, 1994; Ekholm et al., 2009). It is therefore important that surveys reflect the variation in the target population appropriately (Ekholm et al., 2010). Compared to self-administered surveys, interview surveys as the ones used in Studies 1–3 allow for clarification by the interviewer if a respondent is unsure about the meaning of a question. In addition, certainty about the identity of the respondent is clearly higher in interview surveys (Vogt et al., 2012). Further, compared to telephone surveys, the overall response rate tends to be higher in face-to-face interview surveys (Ekholm et al., 2010). Interviews were primarily conducted face-to-face in both interview surveys from which data was utilized in Studies 1–3.

The cross-sectional design means that all variables were assessed at a certain point in time. This type of study design has generally been regarded efficient when investigating important work-related phenomena (Spector, 2019). A commonality of Studies 1–3 was that they aimed to explore whether there were associations between variables. The cross-sectional design was regarded an appropriate study design in Studies 1–3 as it has proved useful in

exploratory research and when the timeframe is unknown. Additionally, alternative explanations were possible to rule out by adding control variables in the cross-sectional design. Further, similar to in many prior studies, the cross-sectional design in Studies 1–3 was coupled with single-source survey data (Spector, 2019).

8.1.2 Participants

Studies 1 and 2

The two first studies were based on national data from the QWLS. Since 1977, the QWLS is performed on a regular basis to monitor Finnish workers' working conditions and changes in them. The QWLS sample is obtained from the labor force survey, which is conducted by Statistics Finland, a governmental national statistics service provider. For the QWLS sample, either employed persons or wage and salary earners are drawn from the labor force survey. The collected information concerns the physical, mental, and social work environments, the contents of work, employees' labor market positions, conditions of employment, values and valuations of work, and factors at the work organization level.

Specifically, Studies 1 and 2 utilized QWLS data from the eighth wave collected in 2018. The QWLS 2018 targeted participants aged 15–67 who were identified as employed wage and salary earners regularly working at least 10 h per week. In the 2018 interview survey, the interviews were primarily conducted face-to-face, and the duration median of the face-to-face interviews was 63 min. Further, the number of persons participating in the QWLS 2018 was 4110, giving a response rate of 66.8 %. This large-scale, interview survey included 652 variables. Further information on the survey can be found elsewhere (Sutela et al., 2019).

Further, specific inclusion criteria were applied in Studies 1 and 2 to meet the aim of the studies. The inclusion criteria of Study 1 specified that respondents had to live in a household with children under 18 years and be involved in a cohabiting relationship (i.e., married, engaged, or registered partnership). Subsequently, the final number of participants in the sub-sample of Study 1 was 1431. Similarly, the inclusion criteria of Study 2 specified that participants could be classified into the five family life stages as defined by Hill et al. (2008), resulting in a subsample of $N=3790$.

Study 3

Study 3 were based on European data from the EWCS. Since 1990, this interview survey is regularly conducted by the European Foundation for the Improvement of Living and Working Conditions (Eurofound). The survey aims to comprehensively outline the everyday reality of workers. The EWCS covers themes such as employment status, learning and training, physical and psychosocial risk factors, health and safety, work-life balance, worker participation, as well as work and health. Specifically, Study 3 of the current thesis was based on data from the sixth version of the EWCS collected in 2015. In the context of the present thesis, it is important to note that this version was the first to include items measuring work engagement. The EWCS 2015 targeted participants from 35 countries who were identified as working individuals aged 15 or above. The interviews were conducted face-to-face and lasted for 45 minutes in average. A multistage, stratified, random sample approach was employed in each country. The original sample comprised 43850 participants, giving an overall response rate of 42.5 %. However, the response rate varied considerably by country (ranging from 11 % in Sweden to 78 % in Albania). In total, 374 variables were included in the EWCS 2015 survey. Details on the survey can be found elsewhere (Eurofound, 2015).

In line with the study aim, the inclusion criteria of Study 3 specified that respondents were currently workers (i.e., individuals who were unemployed, retired, on leave, full-time homemakers, full-time students, disabled, and other were excluded) and could be classified into the five welfare regimes (see measures), resulting in a subsample of $N=35401$.

8.1.3 Measures

Work-life balance outcomes

In Study 1, two directions of work-family conflict were measured using single-item statements: WIF and FIW. The survey statement 'I feel that I am neglecting home matters because of my job' was used for measuring WIF, while the statement 'Matters at home at times disturb concentration on my work' was used for measuring FIW. These items were initially scored on a Likert-scale, ranging from 1 ('Totally true') to 4 ('Totally untrue'). Both items were dichotomized. Those who responded 'Totally untrue' were recoded as 'Reporting no WIF/FIW', and those who responded any of the three other options were recoded as 'Reporting WIF/FIW'.

In Study 2, work-life balance was measured using a single-item statement: "How satisfied are you with how well you can combine work and the rest of

your life in your present job?" This item was scored on a 4-point Likert scale. For the purposes of Study 2, this variable was dichotomized into high work-life balance (very satisfied) and other (quite satisfied, quite dissatisfied, and very dissatisfied).

In Study 3, work-life balance was measured using a single-item: 'How well do your working hours fit in with your family or social commitments?'. This variable was dichotomized into very well and less than very well (well, not well, and not at all well).

Work engagement

In Study 3, work engagement was measured using an ultra-short version of the UWES. The mean scale was computed based on the three following items: 'At my work I feel full of energy (vigor)', 'I am enthusiastic about my job (dedication)', and 'Time flies when I am working (absorption)'. Responses were scored on a 5-point Likert scale where higher scores indicated higher work engagement. Cronbach's α was .73 for the current subsample.

Psychosocial work and family factors

In Study 1, selected psychosocial work and family factors were also included in the analysis. Namely, three risk (overtime, task overload, and work pace) and two support factors (superior support and co-worker support) in the work setting, and three risk (only part-time work, task reduction, and refused more work demands) and two support (family support and support from close ones) factors in the family setting were all measured using single-item statements. All risk factors in the work setting as well as the family factor support from close ones were initially scored on Likert-scales and recoded into dichotomous variables, while the original categorization was kept for all other work and family factors.

In Study 2, two factors in the psychosocial work environment (work demands and social support at work) were included in the analysis. Two separate instruments were developed to measure work demands (based on six items) and social support at work (based on five items). The items were averaged to obtain an overall score for the instruments measuring work demands and social support at work, and the internal consistency was good (Cronbach's α = .78 with regards to both scales).

In Study 2, Hill et al.'s (2008) categorization was adopted to measure family life stage. That is, family life stage 1 = aged under 35 years with no children living at home, family life stage 2 = children aged 0–5 years and no older

children living at home, family life stage 3=children aged 0–5 years as well as 6–17 years living at home, family life stage 4=children aged 6–17 years only (no younger children) living at home, and family life stage 5=aged 45 years or more and no children under 18 years living at home.

Welfare state and regime

In Study 3, a variable measuring welfare state was used (30 welfare states). To measure welfare regime, these 30 welfare states were also grouped according to Ferrera (1996) and Bambra & Eikemo (2009) classification of welfare typologies (five regime types in total). That is, Nordic (Sweden, Denmark, Finland, and Norway), Conservative (Austria, Belgium, France, Germany, Netherland, Luxembourg, and Switzerland), Liberals (United Kingdom and Ireland), Southern Europe (Greece, Spain, Italy, Portugal, Cyprus, and Malta), and Central and Eastern Europe (CEE) (Estonia, Lithuania, Hungary, Czech Republic, Poland, Latvia, Romania, Slovakia, Slovenia, Bulgaria, and Croatia).

Background factors

In Study 1, four socio-demographic (chronological age, gender, educational level, and age of children living in the household) and four workplace (temporal work flexibility, spatial work flexibility, employment type, and number of subordinates) characteristics were included in the analysis. The original, dichotomous categorization was kept for gender, temporal work flexibility, and employment type, while the rest of these variables were recoded.

In Study 2, gender (man, woman) was included as a dichotomous variable. Two other socio-demographic characteristics (employment type and cohabiting partner) were controlled for. Both were dichotomous (yes, no).

In Study 3, gender (man, woman) was included as a dichotomous variable. Age (in years) was included as a continuous control variable. Dichotomous control variables were cohabiting partner (yes, no), cohabiting children (yes, no), supervisory position (yes, no), employment status (full-time, part-time), International Standard Classification of Education (ISCED, low ≤ 4 , high ≥ 5) and whether the respondent was the most significant contributor to the household income (yes, no).

The recoding process (including original and recoded variables, survey items, and response options) is presented in detail in Articles 1–3.

8.1.4 Statistical analysis

IBM SPSS Statistics software (version 27) was employed to perform all the statistical analyses in Studies 1–3. First, basic descriptive statistical analysis was employed. Next, different regression analyses were employed in the different sub-studies. Logistic regression analysis was employed in Studies 1 and 2. Two types of multilevel regression analysis – linear and logistic – were applied in Study 3. To explain what multilevel regression analysis is, it can be helpful to first explain standard regression. Therefore, both standard logistic and linear regression analyses are introduced in the next, even though only one of these two (i.e., standard logistic regression) was applied in this thesis. Then, multilevel regression analysis is presented.

Standard regression analysis

Regression analyses are statistical analyses that allow prediction of a score on one dependent variable from the scores on one or more independent variables (Sommet & Morselli, 2017/2021; Brace et al., 2016). If multiple independent variables are included, the analysis is referred to as multiple regression. Multiple regression is useful when estimating human well-being, as it is likely that our behaviors, thoughts, and emotions are influenced by not only one variable but a combination of several variables. Thus, a strength of multiple regression is that it corrects (or controls) for the correlation among the independent variables. (Brace et al., 2016). Further, regression analysis can be used to test different models constituting different constellations of variables (Pampel, 2000). Two types of regression are linear and logistic.

Linear regression is a suitable method of analysis when the dependent variable is continuous, when linear associations between the independent and dependent variables are explored, and when the number of observations is large (Brace et al., 2016). As mentioned above, this type of regression in its standard form was not employed in this thesis.

In contrast, logistic regression is a useful method of analysis when the aim is to predict a categorical dependent variable. When the dependent variable is dichotomous (i.e., contains two categories), this method of analysis is referred to as binary logistic regression. Characteristic to logistic regression is that it does not require a linear association between the dependent and independent variables. Specifically, logistic regression is employed to estimate the likelihood of an event occurring. The odds of an event occurring are given by the ratio of the likelihood of it occurring to the likelihood of it not occurring. However, the odds in this form are mathematically problematic, as the odds for

any event are between the values of 0 and +infinity. Therefore, a logit transformation is applied on the odds in logistic regression. Unlike odds, log odds are symmetric about zero. Thus, in logistic regression, a positive value indicates that the event is more likely to occur than not, while a negative value indicates the opposite (Brace et al., 2016).

In Studies 1 and 2, binary logistic regression analysis was conducted using the Enter method and the associations were explored by calculating odds ratios (OR) with 95 % confidence intervals (CI). In both studies, the variables were manually entered in a stepwise process. In Study 1, reported FIW and WIF (dependent variables), socio-demographic, and workplace characteristics were entered in step 1. The psychosocial work and family factors were added in steps 2 and 3, respectively. In Study 2, work-life balance (dependent variable), background factors and family life stage were entered in step 1. Social support at work and work demands were added in steps 2 and 3, respectively. In Study 2, separate analyses were run for men and women. In both Studies 1 and 2, the goodness of fit of the logistic regression models was estimated using the Hosmer–Lemeshow test (Hosmer et al., 2013).

Multilevel regression analysis

Multilevel regression analysis is a suitable method of analysis when data is multilevel structured (also referred to as nested data). In such a situation, respondents nested in the same cluster are more likely to function in the same way than respondents nested in different clusters. The aim of multilevel analysis is thus to disentangle the within-cluster effects from the between-cluster effects. Multilevel modelling includes a fixed part and a random component (Sommet & Morselli, 2017/2021).

Given the multilevel structure of the data in Study 3, multilevel regression analyses with individuals (level 1) nested within countries (level 2) were applied to meet the aim of the study. That is, between-country variation was studied by applying random intercept multilevel models.

First, multilevel linear regression analysis was applied to examine the association between work-life balance and work engagement. As an initial step, the random intercept model was built to estimate the between-country variation of the intercept. The Intraclass Correlation Coefficient (ICC) was calculated to estimate the proportion of the variance accounted for by clustering. ICC can range from 0 to 1 (where 0 indicates no between-country variation and 1 indicates no within-country variation). It has been demonstrated that an ICC as low as 0.01 can warrant multilevel linear

modelling (Sommet & Morselli, 2017/2021). Further, the Design Effect (DEFF) was calculated which takes both the mean cluster size (N) and within-cluster homogeneity (ICC) into account to quantify the degree to which a multilevel sample differs from a one-level random sample. The DEFF can range from 1 (no difference) to N (a maximal difference), where a DEFF of ≥ 1.5 warrants multilevel modelling (Sommet & Morselli, 2021). In the second step, work engagement was entered together with the control variables. Estimate values with 95 % confidence intervals were calculated.

Next, multilevel logistic regression analysis was applied to examine the variation of work-life balance between countries and the underlying factors for this variation. This latter analysis constituted three models. The random intercept model was run to estimate the between-country variation of the intercept and the ICC (Sommet & Morselli, 2017). The control factors were added in Model 2 and welfare regimes in Model 3. Model fit statistics were estimated using $-2 \log$ -likelihood, Akaike information criterion (AIC) and Bayesian information criterion (BIC).

8.2 Study 4 – Systematic review and meta-analysis

To address the suboptimal reporting of meta-analyses, a guidance called the Quality Of Reporting Of Meta-analyses (QUOROM) Statement was developed in 1996 (Moher et al., 1999). In 2009, these guidelines, renamed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement, were revised to address several conceptual and practical advances in the science of systematic reviews (Moher et al., 2009). Importantly, the new guidelines encompass both systematic reviews and meta-analyses and highlight that completing a systematic review is an iterative process. The definitions provided by the Cochrane Collaboration (Higgins et al., 2019) are adopted by the PRISMA statement. According to these definitions, a systematic review has its starting point in a clearly formulated research question. Further, it uses systematic methods to identify, select, and critically appraise relevant studies, and to collect and analyze data from the included studies. The systematic review may or may not involve a meta-analysis, which refers to the use of statistical methods to integrate the results of included studies. In the case of Study 4, the systematic review included a meta-analysis.

8.2.1 Study protocol

Study 4 was conducted in accordance with the guidelines presented in the PRISMA statement (Moher et al., 2009) to the extent that they apply to non-

medical research. These guidelines include following a checklist for reporting, which can be viewed in the supplementary material of Study 4.

8.2.2 Search strategy

The search strategy was comprehensive and included searches in seven international, scientific online databases. Four of these were specialized EBSCO databases: Academic Search Complete, Business Source Ultimate, PsycInfo, and PsycArticles. The three additional online databases that searches were conducted in were Web of Science, SCOPUS, and Google Scholar. Research published between January 2000 and December 2020 was included. The main searches in databases were conducted between September 25 and October 14, 2020, and the same searches were repeated on February 22–23, 2021 to include records from the end of year 2020. The selected databases along with database-specific search strategies are described in detail in the supplemental material of Study 4.

8.2.3 Inclusion criteria

In accordance with the standard PICOS approach (Participants, Interventions, Comparisons, Outcomes, and Study design; Moher et al., 2009), the following eligibility criteria were defined for the systematic review: (i) intervention population target group was working individuals in any industry or organizational context worldwide; (ii) interventions were aimed at developing workplace resources from bottom-up; (iii) comparators, if any, were groups receiving no-intervention (i.e., waiting list and inactive) and/or other intervention; (iv) the primary outcome was overall work engagement or one of its sub-components (i.e., vigor, dedication, or absorption) and measured using the short or long version of the UWES (Schaufeli & Bakker, 2003; Schaufeli et al., 2006); (v) the study design was quantitative (one-, two-, or multiple-armed intervention studies with randomized or non-randomized allocation of participants), qualitative (e.g., interviews), or mixed (i.e., quantitative and qualitative study design combined).

Additionally, eligibility criteria relevant to Study 4 but not specified in PICOS were adopted. Specifically, these criteria were that the included studies should be published in peer-reviewed established journals (i.e., journals with an impact factor, not conference papers, dissertations, or books); written in English; focused on the promotion of work engagement (i.e., not focused on how to prevent decreased work engagement); and the presented study findings should be based on completed intervention studies (i.e., not study protocols).

Intervention studies in which individual bottom-up approaches and individual-level outcomes were in focus were included (i.e., participatory action interventions and/or aggregated outcome measures were not considered), although the interventions could be delivered in various ways (e.g., target groups of employees, individual employees, and online or face-to-face). Due to the psychological nature of the review primary outcome, studies that emphasized physiological resources related to lifestyle and bodily health (e.g., low blood pressure, yoga, and diet), rather than psychosocial resources related to the interaction between the individual and the workplace (which can be inherent in the individual, reside in the social context, or in the way work is organized) were excluded. Since the target population was working individuals, studies focusing on the work engagement of other groups of individuals (e.g., students) were excluded. No limitations were applied regarding the duration of the intervention program.

The meta-analysis was conducted on a sub-set of the studies included in the systematic review. To be eligible for the meta-analysis, the studies had to include a control group (i.e., waiting list, inactive, or other intervention) and provide eligible information to compute pooled effect sizes (alternatively information retrievable from other sources than the actual report).

8.2.4 Study selection and data extraction

Regarding the abstract screening process, the number of retrieved records from the selected databases and the process of screening and selecting studies can be viewed in the PRISMA Flow Diagram (Moher et al., 2009, see Article 4). The full text of records that had been assessed as eligible based on their abstracts were screened, and the quantified agreement between the raters was high (97 % agreement, Cohen's $\kappa=0.91$; Landis & Koch, 1977). In case of disagreement, discussions were held until agreement was reached. When the final dataset of included studies and their reports was decided upon, data were extracted and coded according to the Data Extraction Form, which can be found in the supplementary material of Study 4. Discussions regarding the data extraction, including the study categorization, were held between the authors to ensure consistency. Data extracted from each included study were, e.g., author(s), year of publication, method, study setting (country of origin; industry), and key findings.

8.2.5 Quality appraisal

Quality assessment of the included intervention studies was conducted utilizing the recognized NICE checklist for intervention studies (National Institute for Health and Care Excellence, 2012). No discrepancy between the authors' ratings of the included studies' quality was revealed. A summative quality score was coded for each study as ++, +, or – based on the assessed quality of study population, allocation of participants, outcomes, analyses, and internal and external validity. The highest quality rating (++) indicated low risk of bias, and this rating was given to studies that fulfilled all or most checklist criteria (and it was unlikely that the study conclusions would have been different if the few unfulfilled criteria had been fulfilled). Similarly, a moderate-quality rating (+) indicated moderate risk of bias and this rating was given to studies in which some of the checklist criteria had been fulfilled. The conclusions would likely have remained the same if unfulfilled criteria had been fulfilled, or if poor descriptions of criteria had been adequate. Finally, the lowest quality rating (–) indicated high risk of bias. Studies that received this rating fulfilled few or no criteria and the study conclusions would likely have been different if the missing criteria had been fulfilled.

8.2.6 Calculation of effect sizes and statistical analyses

The effect sizes of the interventions were calculated using Review Manager 5.4.1 software (The Cochrane Collaboration, 2020) for work engagement. Data from all the publications that provided eligible post-test or follow-up data on overall work engagement measured by the UWES (i.e., no sub-scale data considered) were extracted from the study reports, double checked, and entered. Both the weighted mean difference (WMD) and the standardized mean difference (SMD) were calculated as appropriate for the continuously distributed outcome using a random effects model. The random effects model was chosen based on guidelines and recommendations provided by, e.g., American Psychological Association (APA) Publication Manual (Cohen, 1988) for increased interpretability and generalizability. Endpoint continuous data for intervention completers were used in these calculations.

With regard to eligible studies with more than two arms, only the intervention-arm and the control-arm that received no intervention were considered in the meta-analysis. If measures of variance of outcomes could not be found in the study publications or through calculations, the corresponding authors of the identified publications were contacted with data requests. If the missing data could not be retrieved, the study was excluded from the meta-

analysis. Substantially skewed data (where the standard deviation was greater than double the mean value) were not entered in the meta-analysis.

The impact of statistical heterogeneity on the meta-analysis was assessed by quantifying inconsistency among the studies with the I^2 Index test (Deeks et al., 2008). This test describes the percentage of the variability in effect estimates that is due to heterogeneity rather than sampling error (chance). All calculated I^2 -values were deemed acceptable, however, all over 50 % indicating the proportion of the variation in point estimates due to among-study differences being moderate to large. A sensitivity analysis was conducted to test the robustness of the performed analysis and related findings. Only the interventions that retrieved the highest quality rating (++) in the methodological quality assessment exercise were included in this sensitivity analysis. The extracted data also allowed for three post-hoc sub-group analyses; two of them according to two of the explored potential underlying mechanisms and one of them only including studies that applied the short version of the UWES (Schaufeli et al., 2006). The extracted data also allowed for a meta-analysis of pooled effect sizes for role performance (secondary outcome).

8.3 Ethical considerations

World Medical Association (WMA, 2013) has stated ethical principles for research involving human subjects and related identifiable human data and material in the Declaration of Helsinki. These principles were followed in this thesis. Also, the thesis adhered to the general guidelines for the responsible conduct of research and ethical sustainability provided by the Finnish National Board on Research Integrity (TENK, 2019). The guidelines encompass principles of integrity, meticulousness, and accuracy in conducting research, and in recording, presenting, and evaluating the research results. Moreover, the work and achievements of other researchers were respected and acknowledged, for example by citing their publications in an appropriate manner (TENK, 2019).

Study 1 and 2 were based on QWLS 2018 data collected by Statistics Finland, a governmental national statistics service provider. Ethical approval is not required for voluntary, anonymous population surveys. However, the compilation of statistics adheres to the provisions of the Finnish Statistics Act (280/2004). Alongside the Statistics Act, the EU's General Data Protection Regulation EU 2016/679 and the national Data Protection Act are applied to the processing of personal data. Confidentiality of data collected for statistical

purposes is decreed in the Act on the Openness of Government Activities (621/1999). In addition to legislation, Statistics Finland adheres to principles of research ethics and in the event of collecting data directly from citizens with interview surveys, informed consent is always obtained from all involved individuals.

No approval from an Ethics Committee was required for Study 3, as it was conducted on public data (EWCS 2015), made freely available by the EU agency for the Improvement of Living and Working Conditions (Eurofound, 2015).

Data management, including the handling, storage, and protection of data, followed the general guidelines provided by the Finnish National Board on Research Integrity (TENK, 2019).

Study 4 was based on secondary data. As such, some ethical aspects relevant for empirical studies, for example, with regards to data collection and handling, were less relevant in the compilation of this systematic review and meta-analysis. However, general guidelines on research ethics (TENK, 2019) were carefully considered. Also, the quality of the included studies was assessed according to international standards on research conduct.

9 Results

9.1 Results of Studies 1–3: The role of background, psychosocial, and socio-economic factors for work-life balance and work engagement

In line with the overarching aim of this thesis, the findings of Studies 1–3 provide information on support and protective factors that are associated with work-life balance and work engagement, and the association between work-life balance and work engagement. First, a short presentation of the descriptive results related to the main variables of interest (work-life balance and work engagement) will be presented, followed by a presentation of the main results retrieved from the regression analyses. Regarding the regression results in Study 1, the main results remained stable across models. Therefore, only results from the final model for both dependent variables (i.e., FIW/WIF) are presented below.

9.1.1 Descriptive results: reported levels of work-life balance and work engagement

Overall, the reported levels of work-life balance and work engagement were generally high among the studied workers in the Finnish (Studies 1 and 2) and in broader terms – European (Study 3) – welfare contexts.

Studies 1–3 all provided descriptive results related to work-life balance. Study 1 focused on a specific and negative aspect of work-life balance, that is, work-family conflict and included working families caring for young children. Levels of work-family conflict were assessed by distinguishing the group of respondents reporting no interference at all from the group of respondents reporting any or significant interference. The findings of Study 1 demonstrated that a relatively high proportion of the respondents, 31.9 %, reported no FIW. Similarly, 26.6 % of the respondents reported no WIF. Even though a majority of the respondents reported any or significant FIW and WIF, 67.4 % and 73.1 % respectively, it is important to note that experiencing work-family conflict at any level does not equal poor work-life balance but simply indicates that some challenges are experienced related to this aspect of work-life balance.

In Studies 2 and 3, work-life balance was approached from a holistic point of view. In both studies, levels of work-life balance were assessed by distinguishing the group of respondents reporting that they had high work-life

balance (very satisfied in Study 2 and very well in Study 3) from the group of respondents reporting any of the other options. In both studies, approximately one third of the respondents reported a high work-life balance, with 29.8 % reporting a high work-life balance in Study 2 and 29.9 % in Study 3. However, while a high work-life balance was slightly more common among men (31 %) than among women (28.8 %) in Study 2 (the Finnish sample), the opposite was true in Study 3 (the European sample) with 27.9 % men and 31.8 % women reporting a high work-life balance.

One sub-study, Study 3, provided descriptive information on work engagement. In Study 3, the mean score for the UWES 3-item measuring work engagement was 3.95 for the whole sample. Thus, the general level of work engagement was high.

In sum, the descriptive findings of Studies 2 and 3 are perhaps a better indicator of the reported levels of work-life balance as a whole, while Study 1 provided important information on a specific aspect of work-life balance. In addition, it should be taken into account that both Studies 1 and 2 were limited in focus by only including specific groups of Finnish workers in specific family life situations, while Study 3 included a wide range of European workers. Finally, in the single study where the level of work engagement was reported, Study 3, a high level of work engagement was found.

9.1.2 Background factors associated with work-life balance and work engagement

Studies 1–3 were all including background factors in terms of socio-demographic and workplace characteristics in the regression analyses.

In Study 1, two socio-demographic factors as well as one workplace factor were identified as covariates of FIW. That is, the odds for reporting no FIW were lower for respondents aged 35–44 than for respondents aged 20–34. Further, men and non-teleworkers were more likely to report no FIW than women and teleworkers. However, the results demonstrate that none of the socio-demographic and workplace characteristics significantly predicted WIF.

Similarly, in Study 2, the regression results revealed that none of the two background variables (i.e., employment status and cohabiting partner) were statistically significant in any of the models for men. However, for women, employment status was significant in Models 1 and 2, showing that part-time work was positively associated with high work-life balance. In Study 3, results specifically related to the background variables were only presented for the multilevel logistic regression analysis (in the supplemental material). It was

shown that the odds of reporting work-life balance were significantly higher for highly educated respondents compared to those with a low educational background. Older workers were also more likely to report work-life balance than their younger counterparts, however, the statistically significant difference was marginal. Further, those reporting that they had no cohabiting partner/children, part-time work, supervisory position, and who were the most significant contributor to the household income were more likely to report work-life balance than their counterparts.

9.1.3 Psychosocial work and family factors associated with work-life balance

The results of Studies 1 and 2 provided information on the associations between psychosocial work and family factors and work-life balance.

The results of Study 1 provided information on the influence of both psychosocial work and family factors on the two measured directions of work-family conflict. First, the findings demonstrated that two of the examined psychosocial risk and support factors in the work setting were associated with FIW. That is, respondents perceiving more task overload were significantly less likely to report no FIW compared to those perceiving less task overload. Also, respondents perceiving that they often received supervisor support were significantly less likely to report no FIW than those perceiving that they never received supervisor support. Additionally, regarding the psychosocial family factors, the results revealed that the odds for no FIW were higher for respondents who perceived occasional family conflicts compared to those who perceived frequent family conflicts. Regarding WIF, the statistical analysis showed that respondents who perceived low work risks (i.e., overtime, task overload, work pace) were more likely to report no WIF than those who perceived high risks, while no supportive work factors proved significant. Further, both a risk and a supportive family factor were statistically significant: the respondent groups which perceived that they had never had to reduce work tasks due to family reasons and occasional family conflicts had a higher probability for reporting no WIF than their respective reference groups.

In sum, the results of Study 1 revealed both distinct and mutual psychosocial risk and support factors of FIW and WIF. Risk factors in the work setting emerged as especially important covariates since all of them showed statistically significant associations with WIF or both WIF and FIW. In addition, occasional conflicts within the family proved beneficial in the context of both WIF and FIW.

In Study 2, separate regression analyses for men and women were conducted. For men, work life balance was not significantly associated with family life stage. However, social support at work (in Models 2 and 3) and work demands (in Model 3) were significantly associated with work-life balance for men. Specifically, while a statistically significant, positive association was found between perceived social support at work and high work-life balance for men, perceived work demands lowered the odds of high work-life balance. The family life stage variable was statistically significant in all three models for women. Comparing the odds for reporting high work-life balance among women in family life stages 1–4 with women in family life stage 5, the odds were lowest for women in family life stage 2 in all models, followed by women in life stages 3 and 1. In Model 1 and 3, the odds for experiencing high work-life balance were not significantly lower for women in family life stage 4 than for those in family life stage 5. However, in Model 2, the odds were significantly lower for women in family life stage 4 as well. Similar to what was found for men, the odds for reporting high work-life balance were higher for women reporting higher social support at work, and the odds were lower for women reporting higher work demands.

To conclude, the results of Study 2 showed that family life stage generally plays a more important role for the work-life balance experienced by women compared to the work-life balance experienced by men. Further, with regards to both men and women, a positive association between social support at work and high work-life balance was found, while a negative association was found between work demands and high work-life balance.

9.1.4 The socio-economic context, work-life balance, and work engagement

In Study 3, the association between work-life balance and work engagement was analyzed at the European level in the first multilevel analysis. The results of the random intercept model showed that there was between-country variance in work engagement, meaning that levels of work engagement vary across European welfare states. Further, a positive association between work-life balance and work engagement was demonstrated at the European level. Separate analyses for men and women reveal only marginal differences, showing that the association is slightly stronger among men than among women. In the latter multilevel analysis of Study 3, between-country variance in work-life balance was demonstrated for both men and women, and the variance was higher for women. While the between-country variance was not

substantially reduced for men nor for women by including background factors, the variations between countries were substantially reduced for both men and women when welfare regime was included. Moreover, Supplementary Table 1 in Article 3 shows that working men in both Southern Europe and CEE were significantly less likely to report work-life balance than working men in the Nordics, while no statistically significant difference was found between workers in Conservative and Liberal welfare regimes and workers in the Nordic welfare regime. For women, Southern Europe was the only welfare regime in which workers had significantly lower odds of reporting work-life balance compared to workers in the Nordics.

To conclude, the findings of Study 3 provided compelling evidence that work engagement and work-life balance alike vary across Europe and that they are associated with each other at the European level. In addition, welfare regime emerged as an explaining factor of work-life balance at the socio-economic level.

9.2 Results of Study 4: Intervention effects on work engagement

Study 4 systematically reviewed studies presenting bottom-up, resource-developing interventions targeting employees in the promotion of work engagement published between 2000 and 2020. It was a must for the included studies to measure work engagement using the UWES. A meta-analysis was conducted on a sub-set of the studies included in the systematic review. The methods used, including all eligibility criteria, and the study results are described in detail in Article 4.

9.2.1 Studies retrieved for the systematic review and meta-analysis

The total number of records originally identified in the systematic database searches was 1988. After duplicates were removed, the abstracts of 1468 unique records were screened according to the eligibility criteria. During this abstract screening process, an additional 1341 records were excluded, leaving us with 127 records. Following a careful assessment of full-text articles, the final number of articles included in the systematic review was 30, of which one contained two included studies (Gordon et al., 2018), resulting in 31 independent studies. The total sample size of the 31 systematically reviewed studies was $N=6708$. The number of studies that contributed with data to the meta-analysis was 24.

9.2.2 Methodological quality of the included studies

The quality assessment exercise was challenging due to scant reporting in several studies. Poor descriptions of population, allocation of participants (if applicable), and statistical analyses performed were especially common shortcomings of the study reports assessed. Based on the reported information, three studies received a low-quality score, indicating high risk of bias. In comparison, 16 studies received a moderate-quality score, indicating moderate risk of bias, and 12 received a high-quality score, indicating low risk of bias.

9.2.3 Potential mechanisms underlying the intervention effectiveness

Intervention foci

Intervention focus referred to the content of the intervention program and the workplace resources in focus for development. The interventions were categorized according to focus into four different groups based on the proactive bottom-up approaches put forth by Bakker (2017). The interventions focusing on strengths use ($N=8$), mobilizing ego resources ($N=8$), and career self-management ($N=3$) all shared the characteristic that they predominantly developed resources inherent in the individual employees themselves. In contrast, the core of the interventions focused on job crafting ($N=12$) was to develop resources that resided in the participants' social work context and the way work was organized.

Intervention approach

The intervention studies were also categorized in two different groups depending on whether they applied a universal approach, or an approach tailored to the target group's specific needs. In the interventions applying a universal approach ($N=15$), the intervention program was generic, and the exercises, methods, and techniques used could equally well have been delivered to other groups of workers. The tailored interventions ($N=16$) were either partially crafted ($N=8$) or fully crafted ($N=8$) for the targeted population.

Intervention format

Intervention format referred to how the interventions were delivered to the participants. The interventions were categorized according to format in two different groups. First, five interventions were delivered through an online format. The second group of interventions was clearly dominant. Here, interventions were delivered face-to-face ($N=26$).

9.2.4 Effects on work engagement

All studies included in the systematic review ($N=31$) applied quantitative data analysis approaches; 10 of these also applied qualitative data analysis methods. The effect on overall work engagement (measured as a higher-order construct by the UWES) was reported in 30 studies. Among them, increased work engagement was reported in 16 studies (ca 53 % of the studies). Lack of effect was reported in 13 studies (ca 43 % of the studies) and a significant decrease in work engagement was reported in one study. In total, five studies reported effects on at least one of the three sub-components of work engagement as measured by the UWES (Schaufeli et al., 2006). The effect on vigor was reported in four studies: vigor increased in one study and did not change in three studies. Dedication was measured in four studies, of which three reported a positive significant effect and one no significant effect. Finally, the effect on absorption was reported in five studies, of which two reported a positive effect and three no effect.

In the meta-analysis with pooled data comparing the effects of interventions to no-intervention or other intervention controls, work engagement (as measured by the short or long version of the UWES) showed a small but promising statistically significant improvement (24 interventions, SMD: -0.22 , 95 % CI: -0.34 to -0.11 ; Figure 2). The analysis showed moderate heterogeneity ($I^2=53$ %), indicating some inconsistency of the calculated effect size. In a sub-group analysis only including the interventions using the short version of the UWES, the pooled effect size remained nearly the same (23 interventions, WMD: -0.21 , 95 % CI: -0.32 to -0.10), with $I^2=55$ %.

9.2.5 Effects on secondary outcomes: Satisfaction and performance

A few of the studies included in the systematic review, all conducted with work engagement as the primary outcome, also reported the effectiveness of the intervention on secondary outcomes. Among these additional outcomes, dimensions of satisfaction and performance were frequently reported. The intervention effect on dimensions of satisfaction (i.e., job satisfaction, work satisfaction, career satisfaction, basic need satisfaction, and life satisfaction) was reported in seven studies, of which all except one reported increased satisfaction. The intervention effect on dimensions of performance (i.e., task performance, adaptive, task, contextual, and objective performance, and (in-/extra-) role performance) was reported in nine studies. A statistically significant increase in performance was reported in all of them, except for one study with regard to objective performance.

A meta-analysis was conducted on a sub-set of studies that reported the intervention effect on role performance specifically and that provided eligible information to compute pooled effect sizes. In this meta-analysis, role performance showed a moderate to large and statistically significant improvement (five interventions, SMD: -0.57, 95 % CI: -1.08 to -0.07; Figure 3). The analysis showed high heterogeneity ($I^2=74\%$), indicating high inconsistency of the calculated effect size.

9.2.6 Comparing the effectiveness of the interventions based on their foci
Further analysis was carried out as part of the meta-analysis exercise for the controlled interventions according to intervention foci, with the strengths use category showing a promising and statistically significant effect on work engagement (five interventions, SMD: -0.34, 95 % CI: -0.54 to -0.14). The category mobilizing ego resources had at most a small statistically significant effect (seven interventions, SMD: -0.21, 95 % CI: -0.42 to 0.00). In contrast, the two remaining categories did not show any statistically significant effect: career self-management (three interventions, SMD: -0.26, 95 % CI: -0.56 to 0.05) and job crafting (nine interventions, SMD: -0.14, 95 % CI: -0.36 to 0.08).

9.2.7 Comparing the effectiveness of the interventions based on their approach

The work engagement interventions comparing intervention participants with no-intervention participants were also compared according to intervention approach. While interventions with both universal and tailored programs had a statistically significant positive effect on work engagement, the effect of interventions with a universal approach was larger ($N=12$, SMD: -0.29, 95 % CI: -0.47 to -0.10) compared to that of interventions with a tailored approach ($N=12$, SMD: -0.18, 95 % CI: -0.33 to -0.04).

9.2.8 Sensitivity analysis

To investigate the robustness of the analyses performed as part of the meta-analysis and related findings, a sensitivity analysis was performed. Considering the high-quality interventions only, the overall effect of interventions on work engagement remained statistically significant (10 interventions, SMD: -0.14, 95 % CI: -0.27 to -0.01), indicating a small but promising positive effect on work engagement among the intervention participants compared to control conditions. The heterogeneity (I^2) of the sensitivity analysis was 52 %.

9.2.9 Participant experiences of the interventions

Ten of the 31 reviewed intervention studies adopted mixed methods, combining quantitative measures with qualitative data (gained through interviews and open-ended questions in questionnaires and training sessions). Participant experiences related to the intervention design were reported in five studies, with the majority reporting predominantly positive experiences. Nine mixed-methods studies reported the experienced intervention outcome of participants, which was mostly positive. Further, the qualitative results supported the quantitative ones in six studies, while they were more positive in three studies.

10 Discussion

Table 2. A summary of the key findings of Studies 1–4.

Study	Research question(s)	Results
1	What are the associations between FIW/WIF and selected psychosocial risk and support factors in the work and family settings of Finnish working families?	Both distinct and mutual psychosocial risk and support factors of FIW and WIF were identified, at the same time as two socio-demographic factors as well as one workplace factor were identified as covariates of FIW. Risk factors in the work setting emerged as especially important covariates since all of them showed statistically significant associations with WIF or both WIF and FIW. In addition, occasional conflicts within the family proved beneficial in the context of both WIF and FIW.
2	What are the associations between work-life balance, psychosocial work environment (work demands and social support at work), and family life stage among Finnish working men and women (especially among workers in family life stages encompassing the care of young, dependent children)?	A statistically significant association between family life stage and high work-life balance was found for working women but not for working men. Women in family life stages involving the care of young, dependent children reported the lowest odds of high work-life balance. For both men and women, a statistically significant positive association between social support at work and high work-life balance was found, while a statistically significant negative association was found between work demands and high work-life balance.
3	What is the association between work-life balance and work engagement across a wide range of European welfare states? Does work-life balance vary across European countries, and if yes, can this variance be explained by welfare regime?	The study findings demonstrate a statistically significant positive association between work-life balance and work engagement across a wide variety of European welfare states, controlling for background factors.

There is variance between European countries in work-life balance and this can in part be explained by welfare regime.

- 4 What is the evidence base for the effectiveness of bottom-up, resource-developing interventions targeting employees in the promotion of work engagement?
- a. Based on the systematic review and meta-analysis, what is the evidenced effectiveness of the identified interventions for work engagement (primary outcome)? What does the evidence say about other employee outcomes measured (secondary outcomes)?
- b. What study design is applied in the evidence-based work engagement interventions identified?
- c. What are the potential mechanisms underlying the evidence-based work engagement interventions identified?
- The synthesized evidence (based on 31 studies) suggests that bottom-up, resource-developing interventions are effective in the promotion of overall work engagement. However, the evidence regarding the sub-components of work engagement was scattered.
- a. The meta-analysis (based on 24 studies) showed a small but promising intervention effect on work engagement (moderate inconsistency was indicated). Identified secondary outcomes were dimensions of satisfaction and performance. The intervention effect on role performance was meta-analyzed and a moderate to large and statistically significant improvement was shown, but high inconsistency was indicated.
- b. All studies included in the systematic review ($N=31$) applied quantitative data analysis approaches; 10 of these also applied qualitative data analysis methods.
- c. Potential underlying mechanisms explored were intervention foci, approach, and format. The meta-analysis suggests that focusing on strengths use or mobilizing ego resources and adopting a universal approach increase intervention effectiveness.

This thesis contributed to the growing evidence base on the promotion of mental well-being at work by identifying what and how multileveled factors (i.e., psychological, background, psychosocial, and socio-economic factors) are associated with the promotion of two key aspects of mental well-being at work – work engagement and work-life balance.

Adopting a holistic and integrative perspective is necessary for advancing research on mental well-being at work and how it can be promoted. Key findings from Studies 1–3 in this thesis highlight that support and protective factors of mental well-being at work go beyond individual characteristics, as they also include psychosocial factors in the family and work settings, as well as socio-economic factors at the country and welfare regime levels. An important contribution of Study 3 was the demonstrated positive association between work engagement and work-life balance at the European level. Further, levels of work engagement and work-life balance, the two mental well-being aspects of study in this thesis, were generally high among the studied workers in the Finnish (Studies 1 and 2) and in broader terms – Nordic and European (Study 3) – welfare contexts. While this supports the continued use of a universal working life model in the Nordic welfare states, part of the findings in Studies 1 and 2 contested the model’s robustness. It was demonstrated that factors in the contemporary working life pressure workers in ways that the concurrent model is incapable to address properly. At the same time, a key finding of Study 4 was that a standardized, universal approach is to prefer over a tailored approach in bottom-up interventions specifically aimed at promoting work engagement.

Taken together, the findings of this thesis make clear that creating a health-promoting workplace is a multifaceted process requiring a simultaneous focus on factors that both promote mental well-being at work and protect against the factors that cause ill-being. The key findings are summarized in Table 2.

10.1 Multileveled factors of mental well-being at work (Studies 1–3)

10.1.1 Associations between background factors and mental well-being at work

Background factors play a focal role for mental well-being at work but were not the primary focus of this thesis. Instead, they were included as control variables in the studies using primary data (Studies 1–3). In addition, analyses were conducted by gender in Studies 2 and 3, highlighting the different experiences of mental well-being at work by working men and women. There is a small but growing research interest in the influence of background factors on mental well-being at work. For example, prior studies have shown that age and gender are to some extent associated with mental well-being at work, but more research is required to further our understanding on these associations. For

example, both the work engagement and the work-life balance research domains can be criticized for ignoring the influence of age and gender or taking them for granted, which have given birth to myths and assumptions with little support from the empirical literature. Considering the increased number of older workers and women in the workforce (French et al., 2018; Gragnano et al., 2020), this is a serious shortcoming of previous research. The current thesis yielded several findings related to age and gender.

With regards to age, it has generally been assumed that older workers are less engaged than younger ones (Kim & Kang, 2017). Concerns have been raised regarding older workers' engagement and it has been regarded a key issue to find ways in which their talents can be leveraged in an increasingly age-diverse workforce (Douglas & Roberts, 2020). In the work-life balance literature, in turn, it has been highlighted that older workers face increasing responsibilities in the family domain as they have older relatives to care for, as well as prioritize personal development, which negatively impact their work-life balance (Staudinger & Bluck, 2001). At the same time, it has been suggested that older workers are more successful in managing conflicting work and family demands, due to their extensive experience and because they more easily grasp complexity (Staudinger & Bluck 2001; Hill et al., 2014). Thus, while the general and one-sided assumption has been that older workers generally are less engaged than younger workers in the work engagement literature, a more balanced view has prevailed in the work-life balance literature as older workers have been assumed to be both less and more adept to reconcile their work and personal life than their younger counterparts.

Arguably, age stereotypes have been allowed to flourish in both research domains because age largely has been treated as a noise variable rather than a focal area of investigation. This is problematic, as age consistently has been positively, albeit weakly, associated with work engagement (e.g., Schaufeli et al., 2006; Ramos et al., 2016; Lepistö et al., 2018) and work-life balance (e.g., Crompton & Lyonette, 2006; Spieler et al., 2018; Richert-Kaźmierska & Stankiewicz, 2016) in prior empirical studies focusing on age. In line with this, older workers were overall slightly more likely to report work-life balance than younger workers in Study 3. However, the association was weak and could be argued to lack practical relevance (e.g., Schaufeli et al., 2006). In Study 1, the odds of reporting no FIW were lower for respondents aged 35–44 than for respondents aged 20–34. No statistically significant differences were found with regards to the other age categories with regards to FIW, and no age differences were found with regards to the likelihood of reporting no WIF. To

conclude, the results of this thesis suggest that only marginal age differences in work-life balance exist, finding no support to widespread myths of older workers' mental well-being at work.

With regards to previous research on gender in the work engagement and work-life balance research domains, several scholars have questioned the ignorance of gender or claimed that it is taken for granted (Gerson, 2004; Emslie & Hunt, 2009; Banihani et al., 2013). However, underlying assumptions about gender have prevailed in both research domains. In the work engagement research domain, men have been assumed to be more engaged than women (Banihani et al., 2013), and in the work-life balance research domain, women have been assumed to struggle more with balancing the conflicting demands of work and personal life than men (Shockley et al., 2017). In paradox, research on the associations between gender and work engagement respectively work-life balance remains somewhat inconclusive, as the demonstrated associations tend to be weak, and results tend to be contradicting.

First, with regards to the associations between gender and work engagement, international research has reported mixed findings. For example, in a scale validation study based on large-scale data from ten countries, Schaufeli et al. (2006) found no associations between the variables in three countries and weak associations in seven countries. Among the countries where weak gender differences were found, men were found to be slightly more engaged than women in four (including in two Nordic countries: Finland and Norway), whereas the reverse was true in three countries. Descriptive results of Study 3 in this thesis showed that women tended to report higher work engagement scores than men at the European level. Similarly, a few prior studies have demonstrated that women are more engaged with their work than men, including research from Finland (Mauno et al., 2005; Mauno et al., 2007; Taipale et al., 2011).

With regards to the associations between gender and work-life balance outcomes, research has reported weak to moderate statistically significant gender differences (e.g., Grönlund & Öun, 2018). In a meta-analysis on the underlying mechanisms of work-family conflict, men tended to report slightly more WIF, while women tended to report slightly more FIW, but the differences between men and women were small with regards to both WIF and FIW (Byron, 2005). Similarly, little evidence for substantial gender differences in work-family conflict were found in a more recent meta-analysis by Shockley et al. (2017). Overall, there was more evidence for similarities than differences in

work-family conflict experienced by men and women, and the differences can be considered negligible for practical purposes. However, among the more significant gender effects was mothers reporting greater FIW than fathers (Shockley et al., 2017). This is corroborated by the finding in Study 1 in the present thesis, as Finnish men were found to be more likely to experience no FIW than Finnish women in the QWLS data.

Further, Study 2 revealed that work-life balance is experienced differently by Finnish women and men in different family life stages. Work-life balance outcomes have rarely been investigated from a life stage perspective in previous research (Baltes & Young, 2007), but the findings of a qualitative study have illustrated a gendered life-course with respect to experienced work-life balance (Emslie & Hunt, 2009). More specifically, the study found that gender remains embedded in the ways workers negotiate the balance between work and life, with women experiencing that they juggle a wide range of roles also when they have no children to care for while this juggling is strongly intertwined with child-rearing years in the past for men (Emslie & Hunt, 2009). Study 2 presented contradicting findings, as a statistically significant association between family life stage and work-life balance was found for Finnish women but not for Finnish men. More specifically, compared with women in the age of 45 or over with no under-aged children in the home (family life stage 5), women in the earlier family life stages were less likely to report high work-life balance and this particularly applies to women with young, dependent children living at home (family life stages 2 and 3). Thus, the results of Study 2 revealed that a gendered life-course applies to the Finnish working life as well, but it is different from the one previously reported in the international literature.

Issues of gender equality are embedded in these findings. While previous research on mental well-being at work targeting the Finnish – and in broader terms the Nordic – welfare state setting has highlighted gender equality as a focal issue, this thesis is among the first to highlight the pressing need to shift focus in the promotion of gender equality. That is, the Nordic welfare model has primarily promoted gender equality by facilitating women’s careers and their ability to balance their work and family responsibilities. Women in these countries have embraced the possibility to engage in paid work and it has induced feelings of being privileged compared to women in many other countries around the world. As a result, no gender differences were found in the psychosocial work context in Study 1 (as there were no significant gender differences in WIF). However, sustained work engagement requires

opportunity for recovery in the non-work domain (Sonnentag, 2003). In Study 1, women reported more FIW, and in Study 2, women in family life stages involving the care of young, dependent children reported the lowest odds of high work-life balance. These findings make clear that gender differences still exist in the psychosocial family context, implying that women do not have the same opportunity for recovery in the non-work domain as men.

Taken together, the results of Studies 1 and 2 point to the urgency for Finland in particular and the Nordic welfare states in general to promote gender equality by engaging men in unpaid work (i.e., domestic and care work) (Schulstok & Wikstrand, 2020). Juxtaposing the results of Studies 1 and 2 which were based on a Finnish sample with the results of Study 3 which were based on a European sample, it is interesting to note that women slightly more often than men reported a good work-life balance at the European level in Study 3. However, similar to in Study 2, separate regression analyses were run for men and women in Study 3, which should be taken into consideration when interpreting these findings.

10.1.2 Associations between psychosocial factors in the work and family settings and mental well-being at work

Various kinds of psychosocial factors in the work setting and their associations with mental well-being at work were investigated in this thesis, particularly in Studies 1 and 2 focusing on work-family conflict and work-life balance respectively. Similarly, the associations between psychosocial factors in the family setting and work-family conflict were examined in Study 1, while the psychosocial family setting were accounted for in Study 2 by adopting a family life stage perspective.

First, several key variables were identified in the psychosocial work setting. For example, different work demands were consistently linked to reduced work-life balance in both studies. In Study 1, all examined work demands (i.e., task overload, overtime, and work pace) were associated with higher levels of work-family conflict. In Study 2, high scores on the work demands scale were negatively associated with high work-life balance for both men and women in all models. These findings are consistent with previous international research, with several literature reviews showing that work demands hinder different aspects of mental well-being at work (e.g., Christian et al., 2011; Halbesleben, 2010; Crawford et al., 2010; Brough et al., 2020; Sirgy & Lee, 2018).

Previous research targeting the Finnish work context is no exception. For example, a comparative study on Finnish and Russian workers found that work

demands, in terms of job insecurity, time pressure and mental stress, decrease work engagement in both countries (Saari et al., 2017). Similar findings have been reported by Mustosmäki et al. (2013) who studied a Finnish sample, and Taipale et al. (2011) who studied a European sample including Finnish workers. In another study based on Finnish data, job insecurity and a high workload have been shown to be negatively associated with job satisfaction (Mauno et al., 2013). Further, a study on Finnish, Dutch, and British workers demonstrated that working non-standard schedules was associated with poor work-life balance for Finnish and British parents, while overtime and a high work pace were associated with poor work-life balance in all three countries (Tammelin et al., 2017).

The results of this thesis thus largely support prior studies in which it has been found that psychosocial work demands are central for mental well-being at work. Further, Study 1 makes a specific contribution to the literature on the associations between work demands and work-family conflict. Even though it is common knowledge that work can interfere with family and vice versa in contemporary research on work-family conflict (e.g., Mesmer-Magnus & Viswesvaran, 2005), many studies, also those targeting the Finnish work context, tend to either investigate only one direction (e.g., Tammelin et al., 2017) or combine the two directions of interference into the same outcome variable (e.g., Mauno et al., 2013). By keeping WIF and FIW as separate variables, Study 1 demonstrated that work demands are more frequently related to WIF than to FIW in the Finnish work context. This finding lends support to at least one prior Finnish study in which work demands were studied and WIF and FIW were kept as separate outcome variables (Kinnunen & Mauno, 1998).

In addition to work demands, social support at work was included as a psychosocial variable in Studies 1 and 2. In accordance with the JD-R model, social support at work is usually regarded as a resource which protects workers from the perceived negative effects of work demands. In addition, it is regarded to promote mental well-being at work, including levels of work-life balance (Demerouti et al., 2001). However, the findings on social support at work and its associations with work-life balance in Studies 1 and 2 are not completely conclusive.

Social support at work did not play a central role in Study 1 as only one work support variable (superior support) was significant for FIW. Additionally, the significant effect was in the opposite direction than that expected, as those who often perceived superior support were less likely to report no FIW. In Study 2,

in turn, a positive association was demonstrated between high work-life balance and social support at work for both men and women in all models.

An explanation to the contradicting findings of Studies 1 and 2 could be that in comparison with Study 1 focusing on specific sources of social support, various sources of support were included in Study 2, including broader sources of support, which have been shown to relate to work-life balance outcomes more strongly than specific sources of support (French et al., 2018). Another explanation could be the different operationalizations of work-life balance. While Study 1 dealt with specific aspects of work-life balance, i.e., two directions of work-family conflict, Study 2 conceptualized work-life balance as a holistic construct. The interpretation is therefore that different factors in part are underlying work-family conflict and work-life balance, and that social support is slightly more important for protecting the latter. As discussed in the theoretical perspectives section, different meanings have been attributed to the concept of balance (e.g., work-family conflict) in previous literature. A danger with this is that it is not clear what balance is and how it relates to other variables, as associations identified with one conceptualization of balance may or may not be identified with other conceptualizations (Casper et al., 2018). Demonstrating that work-family conflict and work-life balance relate differently to psychosocial variables is therefore an important contribution to the balance literature that could advance theory development and empirical research alike.

The findings of Study 2 on social support at work are more in line with previous international and Finnish research than the findings of Study 1, suggesting that social support at work plays a significant role for mental well-being at work. In fact, there exists a strong evidence base for positive associations between social support in the work setting and various aspects of mental well-being at work. For example, Harris et al. (2011) examined various sources of social support at work and found that career mentoring and task support had the strongest associations with job satisfaction. Similarly, social support at work and work engagement have repeatedly been associated with each other. For example, studying Finnish workers, Bakker et al. (2007) found that supervisor support and organizational climate both promoted work engagement, particularly when work demands were high. Also, Kiema-Junes et al. (2020) showed that co-worker support and supervisor support promoted work engagement in the Finnish work context, and research from other contexts have reported similar results (e.g., Caesens et al., 2014; Orgambidez-Ramos & Almeida, 2017). Reviews by Byron (2005) and French et al. (2018)

revealed that several studies have paid attention to the role of social support for work-family conflict, mostly demonstrating positive associations between the variables.

However, it is remarkable that relatively few prior Nordic studies have examined the associations between social support and work-family conflict in particular (for exceptions, see Weckström, 2011; Pal & Øystein Saksvik, 2006; Mauno & Rantanen, 2013), which makes the findings of Study 1 an important contribution to the Nordic literature on how work-family conflict is shaped by the psychosocial work setting. Further, among prior Nordic studies, only the study by Pal & Øystein Saksvik (2006) reported similar results as Study 1 in this thesis, showing that social support had no significant positive influence on work-family conflict. However, the sample in Pal & Øystein Saksvik's (2006) study was relatively small compared to the sample in Study 1, which means that the results of Study 1 are more robust and thus an important addition to the literature.

In addition to factors in the psychosocial work setting, the results of this thesis also demonstrate that factors in the psychosocial family setting are associated with mental well-being at work. In Study 1 focusing on work-family conflict, family demands were measured in terms of whether family responsibilities have enforced job task reduction, part-time work, or the refusal of increased work demands. In contrast to most prior studies on work-family conflict, Study 1 thus went beyond using the number and ages of children living in the household as proxies for family demands (Annor, 2016) while at the same time acknowledging their importance by controlling for them as socio-demographic variables. Further, Study 1 found that reducing job tasks due to family responsibilities was the only family demand influencing WIF, while none of the family demands influenced FIW. The finding of a cross-domain influence in this direction was in line with previous work-family conflict research, which for example has shown that family role overload and family involvement influence WIF (Ford et al., 2007; Michel et al., 2011). Further, a reason to why those who had reduced job tasks due to family demands were more likely to report WIF than those who had not is likely to be that the latter group consciously has chosen less demanding job roles during child-rearing years as a coping strategy. Previous research has shown that different factors influence work-family conflict at different organizational levels, and that workers at higher levels experience higher WIF (DiRenzo et al., 2011). Another but related reason is probably that the first group was more likely to report WIF because this group had reduced tasks due to family

demands that they previously had taken on in terms of extra-role behavior (Leiter & Bakker, 2010), but still found their compulsory tasks related to their work role too demanding.

With regards to support variables residing in the psychosocial family setting, two sources of support were examined in Study 1: family support and support from close ones. Most studies investigating various sources of support and their associations with work-family conflict do not measure and compare multiple sources of support within the work and family setting or across both settings (Van Daalen et al., 2006; French et al., 2018). By including two sources of support from both settings, Study 1 thus contributed with important information on the differential influence of these various sources of support as all variables controlled for each other in the final statistical model.

Regarding the support factors in the family setting in Study 1, associations were found between the variable measuring family support and both FIW and WIF while no associations were found between support from close ones and the two directions of interference. Following for instance Abendroth & Den Dulk (2011), family support was indicated by low levels of family conflicts in Study 1. Family conflicts have consistently been linked to increased levels of work-family conflict in previous Nordic and international research (e.g., Byron, 2005) and this link was supported by Study 1 with respect to the finding that frequent conflicts were associated with high levels of FIW and WIF. However, the results of Study 1 provide a more nuanced picture of the associations than the previous literature has suggested as they showed that these associations are not linear – the most favorable level of conflicts was regarded to be occasional conflicts. In line with often adopted family systems theory (Bowen, 1976), it can be argued that family relationships are complex, members of the family can simultaneously be sources of support and strain and their working conditions are interrelated. Subsequently, occasional conflicts promote an open communication between the family members, which for example allows them to let other family members know when work demands are high, and they need more family support.

As noted above, Study 2 examined the association between work-life balance, psychosocial work environment (work demands and social support at work), and family life stage among Finnish workers, devoting special attention to family life stages encompassing the care of young, dependent children. This makes Study 2 one of the first Nordic studies to use a family life stage approach in an empirical examination of mental well-being at work. At least one prior study on mental well-being at work has been conducted targeting the Nordic

context from a lifespan approach, focusing on work engagement and burnout (Salmela-Aro & Upadyaya, 2018). However, in the study by Salmela-Aro & Upadyaya (2018), life stage was based solely on the worker's chronological age. Even though some differences between life stages were found in the study by Salmela-Aro & Upadyaya (2018), there were more similarities than differences and this is probably due to the reliance on age as proxy for life stage. By adopting Hill et al.'s (2008) family life stage categorization, Study 2 captured the complexity of life stages in a more complete manner than previous studies using life stage models based solely on the worker's chronological age (Demerouti et al., 2012). As mentioned, there were statistically significant differences between family life stages for women (not for men) in Study 2, particularly it was demonstrated that women in family life stages involving the care of young, dependent children reported the lowest odds of high work-life balance. These findings highlight the importance of considering family life stage as a psychosocial factor in the family setting in future examinations of work-life balance, as well as the importance of addressing its complexity, which goes beyond basing it on age only.

Although previous research has examined psychosocial factors in the work and family setting, this thesis contributes to research on mental well-being at work in general and on work-life balance in particular by studying psychosocial factors of both settings simultaneously and by emphasizing that they are interrelated. Further, it can be concluded that the results regarding psychosocial family factors were more scattered than the results regarding psychosocial work factors. Further, in Study 1, while work factors generally were more strongly associated with WIF than with FIW (i.e., stronger within-domain-influence), the examined family factors were fairly equally related to WIF and FIW (i.e., the between-domain influence was comparable with the within-domain influence). Thus, while the results concerning the work factors are in line with the popular domain-specific hypothesis, the results concerning the family factors are not (Frone, 2003; Frone et al., 1992; Frone et al., 1997). This pattern of findings aligns with previous meta-analytical findings (Byron, 2005; French et al., 2018).

10.1.3 Associations between socio-economic factors and mental well-being at work

In this thesis, mental well-being at work has been understood as a construct that is shaped by not only background factors and psychosocial factors in the work and family settings, but also by socio-economic factors. By applying

multilevel analyses in Study 3, in which between-country variance was accounted for, and by including welfare regime as a factor in the logistic multilevel analysis of this study, it was argued that the wider cultural and political context influences mental well-being at work (Bambra & Eikemo, 2009).

In line with this argument, the results of the multilevel linear regression of Study 3 showed a between-country variance in work engagement across European welfare states. At the same time, Study 3 was able to demonstrate a positive association between work-life balance and work engagement at the European level. Thus, Study 3, a large-scale survey study based on data from 30 countries, was the first comparative study to apply multilevel modelling in the analysis of the association between work-life balance and work engagement. Compared to the mixed and inconclusive findings with little generalizability of prior small and single-country sample studies examining this association (e.g., Rothbard, 2001; Niessen et al., 2018), the results of Study 3 can be regarded more robust and applicable to a wide range of country settings.

Similarly, the results of the multilevel logistic regression showed a between-country variance in work-life balance. Moreover, this multilevel analysis demonstrated that the variance between European countries in work-life balance can in part be explained by welfare regime. As not only the nature of work tasks has changed but also the terms and conditions of working life, the disproportionate focus on the influence of factors related to the job characteristics in previous research on mental well-being at work is remarkable (De Moortel et al., 2014).

Among the comparatively few studies that have considered the influence of factors imbedded in the wider, socio-economic context, the inclusion of welfare regime as a variable is quite common. For example, De Moortel et al. (2014) found that low employment quality is significantly associated with poor mental well-being across European welfare regimes. Likewise, both Lunau et al. (2014) and Mensah & Adjei (2020) found that work-life imbalance can be associated with health problems, such as poor mental well-being, across European welfare regimes (Lunau et al., 2014; Mensah & Adjei, 2020). In all three studies, variation by welfare regime was also reported, with the Nordic welfare regime overall performing well in comparison with other European welfare regimes. However, a commonality of these prior studies is that they have taken a risk perspective, focusing on negative aspects of mental well-being at work and how these can be prevented. In contrast, Study 3 was one of the first studies to

include welfare regime as a variable while also focusing on a positive aspect of mental well-being at work, that is, work-life balance, expanding the traditional focus on risk factors to include support factors (Schulte & Vainio, 2010).

In addition to Study 3, some rare studies have accounted for welfare regime in the study of positive aspects of mental well-being at work, but these have focused on other aspects than work-life balance, such as job satisfaction. For example, Westover (2012) found that in countries where the welfare state safety net is strong, the association between intrinsic work characteristics and perceived job satisfaction is stronger in magnitude, while the association between extrinsic work characteristics and perceived job satisfaction is stronger in magnitude in countries where the welfare state safety net is relatively weak. Kjeldsen & Andersen (2013) found that the association between pro-social motivation and job satisfaction is moderated by perceived usefulness of the job for society and other people, and that this usefulness again was dependent on the employment sector and the welfare state regime that the worker was working in. As such, the findings of Study 3 corroborated the findings by Westover (2012) and Kjeldsen & Andersen (2013), in the sense that they provided additional evidence regarding the influence of the broader welfare context on positive aspects of mental well-being at work.

A main finding of Study 3 was related to the association between welfare regime and work-life balance. While it was expected that the Nordic welfare regime would stand out from the others in good terms as it usually is referred to as a good example when it comes to the promotion of work-life balance (Crompton & Lyonette, 2006), the odds of reporting work-life balance was not statistically different for workers in the Conservative and Liberal welfare regimes when compared to those of the Nordic workers. However, results demonstrated that working men in Southern Europe and CEE are less likely to report work-life balance than working men in the Nordics and that the same holds true for working women but only with regard to those in Southern Europe. With regard to Southern Europe, the family-based social support with a clear division of men engaging in full-time work and women in full-time childcare is likely to explain why both men and women in this welfare regime were less likely to report work-life balance (Bambra & Eikemo, 2009; Den Dulk et al., 2013). With regard to CEE, where a dual-earner model dominates and there are traditional gender roles in housework, it was unexpected that men, not women, were less likely to report work-life balance compared to their Nordic counterparts. It is possible that the weakly regulated labor market in

CEE is part of the explanation to why this finding was only found among working men (Mensah & Adjei, 2020).

In addition to welfare regimes and labor market conditions, other socio-economic factors, such as those relating to institutions and the economy, should be accounted for in future studies on work-life balance and related mental well-being outcomes. A few promising studies already exist in which the influence of such socio-economic factors on mental well-being at work has been demonstrated. For example, in an American study, Cahill et al. (2015) demonstrated that the same macro-economic conditions impact different aspects of mental well-being at work in different ways. They showed that when the overall level of the economy is strong, workers report higher job satisfaction and work engagement, but lower work-life balance. This was explained by a stronger career-orientation among workers in stronger economies (Cahill et al., 2015). In another study, Schaufeli (2018) found that except for culture, work engagement was influenced by factors related to the national economy and governance at the country level. However, when indicators from all domains were simultaneously examined, only the economic factor (productivity) remained significantly and uniquely associated with work engagement, demonstrating that the overall level of economy has a great deal of influence on mental well-being at work.

Taken together, the findings of Study 3 and the findings of Cahill et al. (2015) and Schaufeli (2018) points at the complex and multifaceted nature of mental well-being at work, in which the influence of the socio-economic context, encompassing cultural, political, institutional, and economic factors, should not be overlooked. This recognition paves the way for new avenues of research on mental well-being at work. Moreover, as research hitherto, including Study 3, does not make clear how these factors interact, the influence of these factors is preferably examined simultaneously in future research.

10.2 Bottom-up interventions effectively promote mental well-being at work (Study 4)

Historically, a top-down approach has been far more common in interventions aimed at promoting mental well-being at work (Briner & Reynolds, 1999; Nielsen, 2013). However, relatively few have proved effective (Balogun & Hope Hailey, 2004). In addition, contemporary organizations have little time to create resourceful work environments for their workers (e.g., Grant & Ashford, 2008; Bakker, 2017). Therefore, interventions taking a bottom-up approach

have been required to further research on the promotion of mental well-being at work. During recent years, bottom-up interventions have thus been conducted to promote a wide range of mental well-being aspects, such as self-efficacy and affective well-being (Van den Heuvel et al., 2015); basic need satisfaction (Van Wingerden et al., 2017), health (Gordon et al., 2018), and work engagement (Van Wingerden et al., 2016). Furthermore, intervention studies taking bottom-up approaches generally have reported promising results with regards to the promotion of mental well-being at work (Meyers et al., 2013; Demerouti et al., 2019). Yet, their pooled effectiveness largely has remained unclear, which limits the evidence base on which to base future interventions.

The meta-analysis in Study 4 proved that the pooled effectiveness of 24 bottom-up, resource-developing interventions were effective in the promotion of work engagement. These results further the results of the meta-analysis on work engagement conducted by Knight et al. (2017). For example, although bottom-up interventions were included in the meta-analysis of Knight et al. (2017) it was not specifically focused on these types of interventions, and it also contained less studies than the meta-analysis presented in Study 4. Similar to Study 4, a prior meta-analysis has specifically been focusing on bottom-up interventions to promote work engagement (Oprea et al., 2019). However, Oprea et al. (2019) focused on a specific bottom-up approach, job crafting, and found a statistically significant positive effect. In contrast, Study 4 included four different bottom-up approaches, and those focusing on job crafting had no statistically significant effect on work engagement in the meta-analysis (even though a statistically significant increase in work engagement was reported in a clear majority of them in the systematic review part of the study). Part of the reason to why the results of this thesis differ from the results of Oprea et al. (2019) is likely that four studies included in Study 4 was published after the meta-analysis by Oprea et al. (2019) was published. More importantly, however, the results are likely to differ as some of the studies included in the meta-analysis by Oprea et al. (2019) were not deemed eligible for the meta-analysis in Study 4, and thus excluded from the meta-analysis even though they were included in the systematic review. Comparing the two meta-analyses, the results of Study 4 can thus be regarded as more robust and reliable.

Another finding of the meta-analysis in Study 4 was that while both universal and tailored interventions had a statistically significant effect on work engagement, universal intervention programs were more promising than tailored ones. This is interesting, as intervention researchers previously have

been advised to adopt tailored approaches to increase the effectiveness of interventions aimed at promoting mental well-being at work (e.g., Baumeister & Alghamdi, 2015). It is plausible that considerable effort must be made to map the targeted populations' needs and preferences (e.g., conducting a pilot study) and that the intervention needs to be substantially tailored for its effectiveness to increase above the effectiveness of a universal intervention.

Evaluating intervention effectiveness goes beyond traditional statistical analysis and includes the careful evaluation of factors which may have affected the intervention process and implementation (Nielsen et al., 2010; Nielsen, 2013; Abildgaard et al., 2016). That is, it is imperative to explore the reasons for why and how an intervention aimed at promoting mental well-being at work was effective for the field to move forward. This is one of the most pressing issues to intervention researchers in the field as it has been argued that many resource-based interventions can be associated with methodological flaws and risks of bias (Briner & Walshe, 2015). This argument was further corroborated by the results of the quality assessment in Study 4, in which more than half of the interventions indicated at least moderate risks of bias. Specifically, the included interventions in Study 4 were commonly reporting on a reliance on self-reports, which leads to risk of common method variance. Other commonalities with regards to risks and flaws were a small sample size and high dropout rates, which reduce the statistical power. Also, they mentioned struggling with limited generalizability of the study findings and that the examination only focused on short-term intervention effects.

Although part of the interventions included in Study 4 were conducted online and recruited participants from various organizations, part of the interventions was conducted within the confines of an organization. With regards to the latter group of interventions, it is likely that many of the implementation issues could have been reduced or even eliminated by assessing the organization's suitability for the intervention prior to its initiation, including, for example, the individual participants' readiness to change (Briner & Walshe, 2015; Nielsen et al., 2010). Moreover, it is likely that the establishment of strong relations between the researcher and the participating organizations is essential to successful intervention implementation, especially in the long-term.

Also, it was discovered in Study 4 that many interventions provided insufficient descriptions of the study design, sample, and procedure. Not only does lack of information complicate the assessment of study quality and publication bias, but it also makes replications of the interventions difficult.

The adoption of checklists developed in related fields of research could be used to ensure that sufficient information regarding the design and implementation of the interventions is provided (Briner & Walshe, 2015). There are, of course, practical constraints to consider when conducting field work and an ideal intervention design can be very difficult to attain. However, certain key characteristics should at least be aimed for, including that the intervention is aimed at promoting a practically significant and specific well-being aspect (Briner & Walshe, 2015). Finally, it should be noted that non-significant effects do not necessarily equal ineffective interventions, as this finding also could result from missing data (in single studies) or few high-quality interventions (in reviews and meta-analyses). In Study 4, for example, only three interventions were categorized as career self-management interventions, and this is likely to be part of the explanation to why no significant pooled effects could be found for interventions with this focus.

10.3 Theoretical implications and suggestions for future research

Overall, the current thesis applied an integrative perspective, which is associated with theoretical implications and suggestions for future international research. These are discussed below.

First, the integrative perspective applied in this thesis offers at least two theoretical implications. While previous research in workplace mental health promotion to some extent has been influenced by positive organizational psychology, workplace mental health promotion has not achieved prominence as a theoretical lens in previous positive organizational psychology research (Joseph & Sagy, 2017).

The first contribution of the integrative perspective is that workplace mental health promotion, including the salutogenic model, challenges positive psychology to rethink its stance in relation to negative aspects of mental well-being. While both perspectives challenge the mainstream illness-focused perspective on mental well-being at work, they do this in different ways. Positive organizational psychology turns the traditional focus on abnormality and pathology towards normality and optimal functioning, thus maintaining the dichotomy between the normal and the abnormal (Joseph & Linley, 2006). According to the salutogenic model, in turn, mental well-being should be defined in terms of an ease–dis-ease continuum, thus dismissing the artificial dichotomization of well-being into illness and wellness (Antonovsky, 1979). In

other words, the salutogenic model shifts the focus from reducing stressors to facilitate becoming more well-being. In line with this notion, future research in positive organizational psychology should acknowledge that even the fully engaged, balanced, and mentally well-being individual has moments of disengagement, days when reconciliation between working and personal life is more challenging than usual, and occasionally feels mentally ill. Similarly, even the most disengaged individual can experience moments of work engagement. For example, work engagement is often regarded as the antipode of job burnout, but the salutogenic thinking suggests that positive organizational psychology considers the implementation of work engagement at all points along the well-being-spectrum.

The second contribution of the integrative perspective relates to the role of social structures in explaining positive organizational psychology concepts. In contrast to the individual-centered JD-R model – and in more broad terms – the field of positive organizational psychology, the salutogenic model – and in more broad terms – the field of workplace mental health promotion – stems from a systems theory framework, emphasizing the context within which individual strengths and potential are shaped (Torp et al., 2011). The JD-R model (Demerouti et al., 2001), for example, regards the role of work-related experiences as essential, but it largely neglects the fact that these experiences are themselves shaped by the broader social structure, such as welfare regimes. The key role of welfare regimes for mental well-being at work is, in turn, widely acknowledged in workplace mental health promotion research (e.g., Torp & Reiersen, 2020). Thus, future research in positive organizational psychology would benefit from viewing mental well-being at work as a construct that is likely to be shaped by not only the individual themselves and the workplace, but also by the socio-economic context.

Taken together, an integrative perspective allows research on mental well-being at work to address both individual and organizational factors and the overarching, contextual issues in relation to mental well-being at work, and to consider the resources of healthy functioning.

10.4 Practical implications

This thesis has contributed to a better understanding of the support and protective factors of two key aspects of mental well-being at work – work engagement and work-life balance – in contemporary working life. Mental well-being at work is important: by giving this priority, organizations contribute to

a health-promoting society (Di Fabio, 2017) at the same time as they boost their productivity (Wright & Cropanzano, 2000; Guest, 2017).

Specifically, this thesis identified a range of support factors, such as background, psychosocial, and socio-economic factors that can protect workers from the potentially harmful effects of increasing work and family demands and that can be a resource for mental well-being at work in contemporary working life. Also, in Study 4 it was demonstrated that organizational investments in bottom-up, resource-developing interventions is worthwhile, and that interventions can be used as a tool for business leaders, consultants, and human management professionals.

Practitioners who wish to implement bottom-up, resource-developing interventions in their mental health promotion work are advised to make use of standardized, universal intervention approaches in which workers are supported to use their personal strengths and mobilize their ego resources. While tailored solutions sound attractive, the results of this thesis suggest that such solutions are less worthwhile, and that organizations are better off using established solutions as this can both save their time and money and lead to even stronger intervention effects in the desired direction. However, some caution is warranted here as some of the included interventions that were classified as tailored interventions in the meta-analysis only were tailored with regards to specific intervention elements, rather than in the sense that the whole intervention process and implementation would have been developed according to the participants' specific needs and expectations. It is likely that participants engage more in interventions that are fully tailored, but more research is needed on this matter before organizations can be recommended to make the substantial investment efforts that are likely to be required if an organization wishes to provide their workers with an intervention experience of this kind.

Further, a successful implementation of the intervention includes several factors, such as high-quality content of the intervention program and high-quality trainers, levels of engagement and commitment among participants and managers (Burke & Hutchins, 2007). All this, and the degree participants are involved in the decision-making and planning of the intervention (Nielsen, 2013) are important to consider also in bottom-up interventions. Although workers are expected to make the desired changes themselves in bottom-up interventions, the intervention process must be carefully planned and structured, optimally in joint efforts by employees and managers.

Policy makers in Finland, and in wider terms the Nordics and Europe, can also make use of the findings, particularly the findings in Studies 1–3, by reconsidering how different work-life balance policies may yield both intentional and unintentional effects on workers' mental well-being at work.

For example, the emphasis on full-time employment in the Finnish society has resulted in positive effects in the past, such as promoting gender equality (Pfau-Effinger, 2005). However, it has also created a situation where the option to full-time work is to not work at all (Yerkes et al., 2022). This either-or situation can become pressing to working families, especially during the child-rearing years where high demands from work and personal life tend to coincide, such as in family life stages 2 and 3 in Study 2. Many of them who currently have chosen to not work at all are likely to be inclined to accept a part-time work if the option is made more easily available. However, for such a cultural change to succeed, strong collaboration is likely to be needed between the government, employers' organizations, and trade unions.

Also, the double-burden among those who currently have chosen to work full-time while they also have children to care for at home can be detrimental to their mental well-being in the long-term. According to the findings of this thesis, this is especially with regards to working mothers, as these were more likely to report that their family responsibilities interfered with their work responsibilities (in Study 1) and were more likely to report lower levels of work-life balance, especially when they had young, dependent children living at home (in Study 2). Subsequently, another way for policy makers to make use of the findings of this thesis is to promote gender equality not only in the work setting, but also in the family setting, to prevent that high levels of burnout become widespread among working mothers (Roskam et al., 2022). Moreover, from a policy perspective it was interesting that Study 3 established a positive association between work-life balance and work engagement at the European level. Sustaining and promoting work engagement is important, as engaged workers are more proactive, open to develop new skills, and enthusiastic about their jobs (Bakker et al., 2008). Furthermore, they perform better compared to their counterparts (Halbesleben, 2010). As Study 3 indicated that working men in Southern Europe and the CEE and working women in Southern Europe were less likely to report work-life balance than working men and women in the Nordic welfare regime, European policy makers and especially those working for the welfare of Southern Europe and CEE should take the association between these two variables into account in the establishment of health-promoting and productive workplaces and societies in large.

Overall, the results of this thesis suggest that it would be wise for Finland – and in broader terms the Nordic welfare states – to return to the initial core elements (e.g., universalism, egalitarianism, and inclusiveness) of the Nordic welfare model. The findings of this thesis suggest that mental well-being at work is best addressed by using a system-oriented thinking and promoted when bottom-up approaches are advocated in the workplace setting. Promoting gender equality remains a focal issue, but the findings of this thesis suggest that the focus should be shifted from promoting gender equality in the work setting to the family setting to better correspond to the needs experienced by contemporary workers. However, several aspects of mental well-being at work remain to be further explored to fully determine how the Nordic welfare model fits into the contemporary working life.

10.5 Methodological viewpoints

10.5.1 Study designs and methods

The choice of study design and methods in all included studies was guided by the overarching aim of this thesis.

Three of the included studies were based on primary data from national (Studies 1 and 2) and European (Study 3) large-scale, high-quality interview surveys. The interviews were primarily conducted face-to-face in both surveys. Interview surveys are different from other types of surveys in many respects. For example, compared to self-administered surveys, interview surveys are more costly and require more effort to reach a large sample size, but they are also associated with many advantages. For instance, if a respondent is unsure about the meaning of a question, this can be clarified by the interviewer, while there is no such opportunity in a self-administered survey. Further, while researchers' certainty about the identity of the respondent and the time devoted by the respondent to each question are high in an interview survey, they are low in a self-administered survey (Vogt et al., 2012). Compared to telephone surveys, the overall response rate tends to be higher in face-to-face interview surveys (Ekholm et al., 2010). In similarity with other types of surveys, however, interview surveys are regarded a quantitative data collection method. Although it could be argued that the inclusion of a study adopting a qualitative data collection method, for example in terms of in-depth interviews or focus group interviews, would have strengthened the validity of the findings, it is well-established that the research design and methods should

be selected according to the research question rather than the other way around (Vogt et al., 2012).

Further, typical to cross-sectional survey studies (Spector, 2019), the three included interview survey studies relied on single-source self-reports. Subjective appraisals are associated with a risk of common method bias (Podsakoff et al., 2003). For example, a worker who is low in well-being may underestimate, while a worker who is high in well-being may overestimate, the social support that is given to him or her. Nevertheless, subjective appraisals are important to assess internal states, such as mental well-being at work, and it is not always certain that the use of alternative sources are able to be as accurate as self-reports (Spector, 2019).

Regarding the statistical analysis methods in the three studies that were based on primary data, both standard and multilevel regression analyses were employed. The use of regression analyses is associated with both strengths and limitations. When it comes to binary logistic regression, this analysis can be used to analyze non-linear data and it makes no assumptions regarding normal distribution. Further, binary logistic regression allows for studying groupwise differences while controlling for potential covariates. In binary logistic regression, however, dependent variables must be dichotomous, meaning that nuances of the data might remain undiscovered. Binary logistic regression was regarded a valid statistical analysis method in Studies 1 and 2, as dichotomizing the dependent variables was a way to separate the respondent group of specific interest from the rest of the respondents, so that systematic differences in what risk and support factors they perceived could be identified. Multilevel regression, in turn, is a suitable method of analysis when nested data is used (Sommet & Morselli, 2017/2021), as in Study 3. As individuals were nested in countries, a limitation of the conducted multilevel analyses in Study 3 could be the considerable variation in the response rate between the countries as this could be associated with bias. However, there were no to only marginal changes in the results when additional multilevel analyses, in which response rate was adjusted for, were conducted (results not shown).

In Study 4, a systematic review and meta-analysis was performed. A strength of the systematic review was that it followed the rigorous guidelines presented in the PRISMA statement (Moher et al., 2009) to the extent that they apply to non-medical research, including a checklist for reporting and the standard PICOS approach when defining the eligibility criteria. Another strength of the systematic review was that it included a meta-analysis.

10.5.2 Sampling

Studies 1 and 2 utilized data from the QWLS, which, in turn, was obtained from the labor force survey. To be eligible for the QWLS, respondents had to be identified as employed wage and salary earners regularly working at least 10 h per week. The eligibility was assessed during the labor force survey interview, and eligible respondents were invited to participate in a separate interview for the QWLS. Among the labor force survey respondents that were invited to participate in the separate QWLS survey, 66.8 % agreed to participate. This is a very good response rate for interview surveys (Sutela et al., 2019), and the sample characteristics were well representative of the total study population.

Study 3, in turn, utilized data from the EWCS, where a multistage, stratified, random sample approach was employed in each country. The overall response rate in the EWCS survey was a little lower than in the QWLS, 42.5 %, and the response rate varied considerably by country (ranging from 11 % in Sweden to 78 % in Albania). A commonality among three of the countries found in the bottom of the country ranking with regards to response rate was the two-phase approach, in which respondents were recruited via telephone for a face-to-face interview. The two-phase approach was used in Denmark, Sweden, and Finland. The lowest response rate, which was found in Sweden, is suspected to be linked to the worsening survey climate in Sweden (Eurofound, 2015).

However, the response rate alone is usually considered to poorly indicate non-response bias (Ekholm et al., 2010). For example, an important distinction is made between non-contact (i.e., failure to get in contact with the potential participant) and refusal to participate (Lynn & Clarke, 2002). The non-contact rate was low in both surveys, 1.6 % in the QWLS and 1.8 % in the EWCS, thus reducing risk of substantial bias (Heerwegh et al., 2007). Considerable effort was made in the field work of these surveys to reach the low non-contact rates. For example, with regards to the EWCS, it was reported that at least four separate contact attempts in terms of physical visits were required by the interviewers in all countries before a case could be marked as a non-contact in the EWCS (the additional telephone recruiting in three countries required at least 10 contact attempts) (Eurofound, 2015).

Similarly, if there are systematic differences between those who accept to participate and those who refuse, there is a risk of sample selection bias (Cuddeback et al., 2004). For example, workers suffering from mental health problems are more likely to decline the invitation to participate or avoid answering the questions related to their mental well-being at work. This would

reduce the validity of the findings, as those who accept to participate will represent a group of resourceful, healthy workers. This is referred to as the healthy worker effect (McMichael, 1976). However, all potential participants in both surveys were informed about the strict confidentiality applied to the management of the data, which may have reduced the risk of a healthy worker effect. Further, this thesis was about the promotion of certain positive aspects of mental well-being, and health promotion is a broad approach which, in a work setting, primarily focus on the general, healthy workforce (Barry & Jenkins, 2007; Jané-Llopis et al., 2007).

In all three interview survey studies, inclusion criteria additional to those specified for the original QWLS and EWCS samples were applied in correspondence with the overarching aim of the studies and the related research questions. In all three studies, the intention was to attain a representative sample with regards to background factors. For example, the gender distribution was good, and no exclusion was made based on the sector, profession, or employment status (full-time or part-time) of the workers. However, the additional inclusion criteria could be argued to have made the samples less representative.

In Study 1 targeting working families, representation was not considered an issue as the descriptive statistics revealed that the sample distribution across socio-demographic characteristics was similar with the original QWLS sample, except for the variables that the additional inclusion criteria were based on (i.e., children under 18 years living in the household and a cohabiting partner).

In Study 2, the use of Hill et al.'s (2008) family life stage classification could though be considered to make the sample less representative of the total study population, as it does not consider all workers who might be considered to belong to a family. For example, workers who are not parents and above 35 years were excluded due to this classification. However, the use of this classification could also be considered a strength, as it has been adopted in other studies as well (e.g., Wepfer et al. 2015) and thus allowed a comparison between research results.

In Study 3, the additional inclusion criteria according to the adopted welfare regime typology resulted in the exclusion of respondents from five countries. The results of Study 3 are thus not generalizable to workers outside the five included welfare regimes, constituting 30 countries in total. However, the use of an established classification can also be considered a strength of Study 3, as the adopted typology highlighted how the work-life balance is shaped by the socio-economic context. Other approaches, such as ones taking institutional

and labor market factors as their starting points, could also have been useful, but considering such factors would have been out of scope for the study specifically considering differences across welfare regimes regarding work-life balance policies.

Regarding Study 4, several of the studies included in the meta-analysis were based on a low sample size and thus reduced the statistical power. The lack of statistical significance in some of the findings is probably the result of a combination of small effect sizes and lack of statistical power due to the low number of studies, many of which included small samples. All these factors limited the extent to which conclusions can be drawn from Study 4 regarding the evidenced effectiveness of interventions. However, to nuance the information on the evidence identified, as well as to test the robustness of the findings from the meta-analysis exercise, several sub-group analyses were performed. For example, the sensitivity analysis that included only high-quality studies showed a lower but still statistically significant pooled effect on overall work engagement.

10.5.3 Operationalization

Warr (2012) notes that many different operationalizations exist for constructs such as well-being. Subsequently, different operational definitions may be addressing different versions of the same construct. While this is inevitable, research can be improved by clearly stating each variable's conceptual definition and acknowledging the ways in which the operational measurements do and do not match this definition. Thus, it should be recognized that this thesis addressed mental aspects of well-being, not for example physiological aspects. Further, it focused on mental well-being at work. While it could be argued that the scope of the thesis encompassed more than work, given that work-life balance was one of its key concepts, the concept of work-life balance is well-matched with the definition of contemporary work as increasingly boundaryless and flexible. Also, the study populations were limited to workers; hence, no non-working individuals were included in any of the samples.

An important distinction can also be made between negative and positive aspects of mental well-being at work, and this thesis contributed to research on the less researched, positive aspects (e.g., Schulte & Vainio; 2010). While the positive side of the broad concept of mental well-being at work likely would have been better addressed if additional aspects, such as job satisfaction, happiness, and sense of purpose, had been included into the examination, this

would have been out of scope for the current thesis. This thesis specifically set out to examine mental well-being at work in relation to contemporary working life, and work engagement and work-life balance were considered to capture two important aspects of this. Furthermore, it was regarded fruitful to include both work engagement and work-life balance in the thesis and study them together in Study 3 as there exists an interesting dynamic between them and previous research on their association has been inconclusive (Montgomery et al., 2003; Rothbard, 2001).

10.5.4 Measurement

There were both limitations and strengths related to the measurement instruments used in the included studies. Work engagement was studied in two of the included studies (Studies 3 and 4). In Study 3, work engagement was measured using an ultra-short version of the UWES. Although this scale is widely used in the work engagement literature (Bailey et al., 2017; Shuck et al., 2017; Kelders et al., 2020), a recurring criticism concerns its robustness, which is argued to be weakened due to the three-factor structure (Wefald et al., 2012). At the same time, use of the UWES could be viewed as a strength. One reason for this is that the validity and reliability of the UWES are supported in several studies and in several settings (Schaufeli, 2014). Similarly, in Study 4, the systematic review and meta-analysis, use of the UWES was applied as one of the eligibility criteria. It is likely that an inclusion of the studies that were excluded on this basis would have aggravated the work with the systematic review and meta-analysis to the extent that the meaningfulness and robustness of the study results had been diminished.

Work-life balance was included as a variable in Studies 1–3. More specifically, single-item statements were used to measure work-family conflict in Study 1, which can be regarded an aspect of the broader concept work-life balance, which was studied as such in Studies 2 and 3. The use of single-item statements could be regarded a study limitation as multiple-item statements generally are preferred in research. However, single-item statements are easy to grasp in an otherwise comprehensive survey from the viewpoint of respondents. Furthermore, the use of a single-item statement to measure work-life balance, a holistic construct (in Studies 2 and 3), is regarded acceptable and even useful (Fisher et al., 2016), and two important aspects of work-family conflict were indeed captured by conducting separate analyses for FIW and WIF (Frone, 2003) (in Study 1), allowing for the identification of

mutual and distinct risk and support factors (Mesmer-Magnus & Viswesvaran, 2005; Grandey et al., 2005).

In addition, it should be mentioned that scales measuring social support at work and work demands were developed in Study 2. The decision to use the scales was made after careful consideration. Their internal consistency was acceptable, and the items that were included in the scales were regarded to capture something else together (i.e., social support at work and work demands) than they were as single items. Even though not ideal, the development of these scales was thus considered necessary in Study 2.

11 Concluding remarks

The overall aim of this thesis was to examine support and protective factors that are associated with two key aspects of mental well-being at work, work engagement and work-life balance. Further, this thesis also aimed to examine whether these two aspects of mental well-being at work are associated, as well as to gather the evidence on the effectiveness of individual bottom-up approaches focusing on developing resources to promote work engagement. This thesis presented four empirical studies, of which the two first studies highlighted psychosocial factors in the work and family settings that can support and protect work-life balance, the third study shed light on the role of socio-economic factors for mental well-being at work as well as the association between work-life balance and work engagement, and the fourth study synthesized and meta-analyzed the evidence base on the effectiveness of bottom-up interventions aimed at promoting work engagement.

Overall, the results make clear that a system-oriented thinking is needed, in which factors at multiple levels are considered in the promotion of mental well-being at work. This means that not only background, psychological, and psychosocial factors in the work setting should be considered in positive organizational psychology research on mental well-being at work, but also psychosocial factors in the family setting as well as overarching, contextual factors in the socio-economic setting. The findings also stress the need for research to go beyond the traditional focus on risk factors and negative aspects of mental well-being at work, to also include support factors and positive aspects of mental well-being at work. Further, this thesis adopted the theoretical perspective of positive psychology and was also influenced by the theoretical framework of health promotion. The results demonstrated in this thesis advocate the use of an integrative perspective, as this can further our understanding of mental well-being at work and how it is best supported and protected in contemporary working life.

12 Sammanfattning

Mentalt välbefinnande på arbetsplatsen – stöd- och skyddsfaktorer för arbetsengagemang och balansen mellan arbetsliv och övrigt liv i det samtida arbetslivet

12.1 Introduktion och bakgrund

Främjandet av psykiskt välbefinnande på arbetsplatsen prioriteras alltmer av organisationer världen över. Flertalet rapporter visar att organisationer prioriterar medarbetares arbetshälsa, det är av strategisk betydelse och har ett värde för verksamheten (Nordic Business Report, 2019; CIPD, 2021; REBA, 2018). I skrivande stund befinner vi oss i COVID-19 pandemins svallvågor. Pandemin har onekligen bidragit till att den arbetsföra befolkningens välbefinnande omvärderas och aktualiseras för organisatoriska ledare och politiska beslutsfattare, vilket reflekteras i de senaste rapporterna utgivna av inflytelserika organisationer och forskningsaktörer. Till exempel betonas det att inte bara arbetsplatsen som koncept bör omdefinieras för att psykiskt välbefinnande på arbetsplatsen ska kunna skyddas och främjas, utan grundläggande normer i arbetslivet bör förändras (Nordic Business Report, 2022).

Forskare har länge intresserat sig för psykiskt välbefinnande på arbetsplatsen (Litchfield et al., 2016). Under de senaste åren har intresset ytterligare ökat (Carlisle & Hanlon, 2008; Kowalski & Loretto, 2017), också i finsk och nordisk kontext (Lintula et al., 2022). Fram tills nu har dock främjande av psykiskt välbefinnande på arbetsplatsen främst betraktats som en biprodukt av initiativ där avsikten är att främja uppnåendet av ett enda mål: produktivitet. Alternativt har det betraktats som ett medel med vars hjälp produktivitet kan uppnås. Det är osannolikt att organisationer skulle agera ansvarsfullt och hållbart enbart på grund av etiska skäl. Därför förespråkas i allt större utsträckning ett pluralistperspektiv av forskare, där både psykiskt välbefinnande och produktivitet beaktas som slutmål (Swales et al., 2014; Guest, 2017). Förutom att bidra till ett hälsofrämjande samhälle (Di Fabio, 2017) anses det viktigt att prioritera frågor gällande psykiskt välbefinnande på arbetsplatsen eftersom allt högre krav ställs på arbetstagare (Guest, 2017). Dessutom kan organisationer vinna på att prioritera psykiskt välbefinnande i termerna av ökad produktivitet (Wright & Cropanzano, 2000). För att ett effektivt hälsofrämjande arbete ska kunna göras är dock forskare tvärs över

forskningsfält samstämmiga i att det traditionella fokuset på avvikande beteenden, brister och risker bör utvidgas till att även inkludera optimal funktion, styrkor och potential (Seligman & Csikszentmihalyi, 2000; Seligman, 2002; Schulte & Vainio; 2010; Day & Nielsen, 2017).

Psykiskt välbefinnande på arbetsplatsen kan studeras ur en rad olika perspektiv. För att vår förståelse för vad som skapar välmående, engagerade och balanserade arbetstagare i det finländska och internationella samtida arbetslivet ska kunna avancera används ett integrativt perspektiv i den här avhandlingen i utvecklingspsykologi. Två specifika aspekter av psykiskt välbefinnande på arbetsplatsen ligger i fokus: arbetsengagemang och balansen mellan arbetsliv och övrigt liv. Avhandlingen bygger på kunskap producerad i olika delområden inom psykologin, speciellt inom positiv organisationspsykologi. Även om olika psykologiska aspekter betonas inom olika delområden har alla psykologiska perspektiv gemensamt att de har ett individcentrerat, psykologiskt angreppssätt. Därför drar denna avhandling nytta av den kunskap som finns inom hälsovetenskapliga discipliner också, speciellt arbetsplatshälsopromotion. På det här sättet kan social miljö- och populationsbaserade angreppssätt kombineras med det individcentrerade, psykologiska angreppssättet, vilket resulterar i ett holistiskt och integrativt förhållningssätt.

Psykiskt välbefinnande kan definieras som "optimal upplevelse och funktion" (Ryan & Deci, 2001, s. 141). Vad detta innebär har debatterats inom forskningen men i huvudsak finns två traditioner representerade: hedonistiskt och eudaimoniskt välbefinnande. Medan hedonistiskt välbefinnande handlar om en subjektiv upplevelse av glädje (Diener et al., 1999) och betecknar det behagliga livet (Gallagher et al., 2009), handlar det eudaimoniska välbefinnandet om förverkligandet av mänsklig potential (Ryff & Keyes, 1995) och betecknar det meningsfulla livet (Gallagher et al., 2009). Initialt fokuserade den eudaimoniska traditionen enbart på den enskilda individen, men numera har den kommit att inbegripa också den sociala funktionen hos individen (Keyes, 1998). Även om definitionen av psykiskt välbefinnande fortfarande kvarstår som något oklar, förespråkas oftast ett integrativt perspektiv (Keyes, 2005/2007; Keyes et al., 2002).

I den här avhandlingen används definitionen av Ryan & Deci (2001) och ett integrativt perspektiv används. I enlighet med detta betecknar psykiskt välbefinnande på arbetsplatsen specifikt optimal upplevelse och funktion hos arbetstagare, det vill säga individer som deltar i det samtida arbetslivet.

Det samtida arbetslivet genomgår dramatiska förändringar. Globalisering, till exempel, är en trend med stora ekonomiska konsekvenser. I det samtida arbetslivet kan människor, pengar, produkter och tjänster röra sig lätt och ofta över nationella gränser (Torp & Reiersen, 2020). Globaliseringen intensifierar den internationella konkurrensen och skapar en dynamisk arbetskontext. För arbetstagare leder globaliseringen till ökade arbetskrav, arbetet ska genomföras alltmer effektivt, arbetsuppgifterna blir mer komplexa och kraven på färdigheter hårdnar (French et al., 2018; Gragnano et al., 2020). En relaterad trend är den teknologiska utvecklingen som gör arbetet gränslöst och flexibelt. Här kan COVID-19 pandemin nämnas som en påskyndande faktor, dock har löst reglerade arbeten som kan genomföras överallt och när som helst dominerat den nordiska arbetsmarknaden redan en längre tid (Allvin et al., 2013). Fokus har flyttat från extern reglering av arbete till att individen själv reglerar sitt arbete. För individen innebär detta ökad autonomi och större ansvar (Mellner et al., 2014), medan organisationen ställs inför utmaningen att hitta nya sätt att organisera, utföra och leda arbete samt stöda deras arbetstagare i att hitta en balans mellan arbetsliv och övrigt liv (Shifrin & Michel, 2022).

Stora demografiska trender reflekteras i en alltmer mångfaldig arbetskraft. En större del av arbetskraften än tidigare representeras numera av kvinnor, hushåll med två försörjare, ensamstående föräldrar och äldre arbetstagare (French et al., 2018; Gragnano et al., 2020). Denna utveckling utmanar den seglivade normen i vilken den "ideala arbetstagaren" existerar enbart för arbete (Acker, 1990). Många arbetstagare kämpar idag med att balansera kraven från arbets- och familjeliv.

Trender i den politiska kontexten har också påverkat det moderna arbetslivet. Traditionellt sett har det funnits en stor variation mellan europeiska länder gällande deras arbetsmarknad och välfärdsmodeller. De nordiska länderna har ansetts ha mer likheter än skillnader och de har förespråkat en gemensam välfärdsmodell och syn på arbetsliv (Bambra & Eikemo, 2009). De har beskrivits som välfärdsparadis där det mentala välbefinnandet främjas (Haavind & Magnusson, 2005). Givet de pågående globala trenderna har dock styrkan i den nordiska välfärdsmodellen ifrågasatts under senare tid (Torp & Reiersen, 2020), modellen anses inte lyckas främja inkludering på samma sätt som tidigare (Borchorst & Siim, 2002/2008; Keskinen et al., 2016; Koskinen Sandberg, 2018). Pågående politiska krafter såsom nyliberalism och åtstramningar minskar statens möjlighet att främja jämställdhet och inkludering. Som exempel kan nämnas offentliga vårdtjänster: vården har i allt högre grad gått tillbaka till att privatiseras eller bli en uppgift

som sköts inom familjen. Tillsammans med åtstramningar försvårar denna tillbakagång familjeupplägget där båda föräldrarna är försörjare och vårdare (Elomäki & Ylöstalo, 2018). I och med detta har experter börjat ge de nordiska länderna rådet att stärka de ursprungliga, grundläggande elementen av den nordiska välfärdsmodellen (Alsos & Dolvik, 2021). Gällande arbetslivet avses framför allt att upprätthålla demokrati och delaktighet på arbetsplatsen, där ett systemorienterat tankesätt och egenkraften hos arbetstagare betonas (Gustavsen, 2007; Arbeids og inkluderingsdepartementet, 2005).

12.2 Teoretiska utgångspunkter

Positiv psykologi valdes som teoretiskt ramverk för avhandlingsarbetet. Under en lång tid var psykologin en disciplin som kretsade kring det patologiska, med fokus inställt på att reparera mänskliga svagheter och avvikande beteende. Positiv psykologi har medfört en bredare syn på människan där inte bara det värsta utan också det bästa i livet inkluderas, med betoning på mänskliga styrkor och potential. Inom positiv psykologi koncentrerar sig forskare på positiva subjektiva upplevelser, såsom välbefinnande, tillfredsställelse och flyt. Positiv psykologi inkluderar både ett intresse för positiva individuella drag och ett intresse för positiva institutioner (Seligman & Csikszentmihalyi, 2000; Seligman, 2002). En artikel av Seligman & Csikszentmihalyi (2000) ledde till bred spridning av positiv psykologi och i dag tillämpas den för att förklara psykologiska processer inom många sammanhang, även organisatoriska sammanhang. Ett underliggande antagande inom positiv organisationspsykologi är att både individen och organisationen kan dra nytta av att tillämpa principer som är sprungna ur den positiva psykologin (Cameron & Caza, 2004; Sweetman & Luthans, 2010).

Två nyckelteorier som båda härstammar från positiv psykologi är resursbevarande teorin (COR-teorin; Hobfoll, 1989) samt jobb-krav-resursmodellen (JD-R; Demerouti et al., 2001). COR-teorin anses vara en av de mest inflytelserika stress- och välbefinnandeteorierna som finns. Även om teorin inte är organisationsspecifik har den använts flitigt för att förklara psykologiska processer i organisatoriska sammanhang under de senaste tre årtiondena (Hobfoll et al., 2018). COR-teorin utgår ifrån att mänsklig överlevnad och utveckling är beroende av förvärvandet och bevarandet av resurser. Med resurser avses allt som individen upplever kan hjälpa måluppnående (Halbesleben et al., 2014). Flera moderna teorier härstammar från COR-teorin, till exempel JD-R modellen. Till skillnad från COR-teorin är JD-R modellen specifikt utformad för arbetskontexten. Modellen innefattar två

olika men sammankopplade processer, varav den ena är hälsohämmande och den andra hälsofrämjande och motivationsingivande. Modellen skiljer på arbetskrav och -resurser. Medan kraven spelar en central roll i den hälsohämmande processen, spelar resurserna en central roll i den motivationsingivande processen. Förutom att de arbetsrelaterade resurserna kan bidra till att en människa växer, lär och utvecklas, och därigenom skapar motivation, har de också potential att förskjuta och förhindra de negativa effekterna av arbetskraven (Demerouti et al., 2001). Senare har också personliga, inneboende resurser hos människan lagts till i modellen (Bakker & Demerouti, 2007).

Teoretiska perspektiv kring hälsopromotion har också haft inflytande på det här avhandlingsarbetet. Hälsopromotion delar många teoretiska angreppssätt och tanketraditioner med den positiva psykologin. Till exempel belyser båda perspektiven de positiva aspekterna av psykiskt välbefinnande, betraktar resurser och potential som centrala begrepp och betonar att utveckling pågår under hela livsloppet. Likt positiv psykologi har hälsopromotion som tanketradition utvidgats under de senaste årtiondena, där det traditionella fokuset på ohälsa och riskfaktorer numera även inkluderar ett fokus på stöd- och skyddsfaktorer för välbefinnande och livskvalitet (Chu et al., 2000). Kontexten har ansetts viktig inom hälsopromotion och det så kallade kontextperspektivet används således i bred skala inom kunskapsfältet (Poland et al., 2000). Inom detta perspektiv anses välbefinnande skapas i människors vardagskontext, där arbetskontexten utgör en nyckelkontext (Chu et al., 2000; Torp et al., 2014; Eriksson et al., 2017). Kontextperspektivet är holistiskt och integrativt, eftersom det beaktar både individuella faktorer och övergripande, kontextspecifika faktorer. Fokus inom hälsopromotion på arbetsplatsen har omdirigerats från att ligga på individens välmående till att handla om samskapande processer som både inkluderar arbetstagare och ledning för att skapa hälsofrämjande arbetsplatser (Chu et al., 2000; Schulte & Vainio, 2010; Day & Nielsen, 2017).

Antonovskys (1987) salutogena modell har försett fältet hälsopromotion med en solid teoretisk grund. Salutogenes beskriver hur olika resurser stöder hälsoutveckling och kan tillämpas på olika nivåer, såsom på individ-, organisatorisk och samhällelig nivå. Hälsa betraktas som en rörelse i ett kontinuum på en axel, där en ände betecknar ohälsa och den andra fullständig hälsa. En viktig del som denna modell utgörs av är känslan av sammanhang, ett begrepp som innefattar tre upplevelsemässiga komponenter: begriplighet, hanterbarhet och meningsfullhet (Antonovsky, 1996). Den salutogena

modellen förespråkar en dynamisk syn där känslan av sammanhang kan utvecklas under hela livsloppet (Lindström & Eriksson, 2005). Arbetskontexten spelar en stor roll för känslan av sammanhang hos många individer, och därför beaktade Antonovsky arbetsrelaterade faktorer i modellutvecklingen (Lindström & Eriksson, 2005). Till exempel uppfattas hälsofrämjande salutogena arbetskaraktäristika inte bara som skyddande faktorer i modellen, men också som något som har en positiv inverkan på arbetstagarens välbefinnande (Jenny et al., 2017).

En hel del tidigare forskning har gjorts om både arbetsengagemang och balansen mellan arbetsliv och övrigt liv. Framför allt har underliggande faktorer studerats, både gemensamma och olika.

Mycket av forskningen inom båda fälten har riktat in sig på psykologiska faktorer. Till exempel har psykologiskt kapital, bestående av själveffektivitet, optimism, hopp och motståndskraft (Luthans et al., 2007), studerats mycket, och har kunnat bevisas ha en positiv koppling till båda begreppen (Avey et al., 2008; Joo et al., 2016; Siu, 2013; Chan et al., 2016).

Till viss del har forskningen inom båda fälten även sett på individuella bakgrundsfaktorer, såsom kön och ålder. Kopplingen mellan kön och arbetsengagemang är fortfarande oklar, medan det tycks finnas en svag men signifikant koppling mellan ålder och arbetsengagemang (Schaufeli et al., 2006). Kopplingen mellan balansen mellan arbetsliv och övrigt liv och kön verkar svag, där slutsatsen ofta blivit att det finns mer likheter än skillnader mellan könen (Shockley et al., 2017). Balans mellan arbetsliv och övrigt liv tycks vara något svårare att uppnå för yngre än för äldre arbetstagare (Crompton & Lyonette, 2006; Spieler et al., 2018).

Psykosociala faktorer har studerats flitigt inom båda fälten, och speciellt arbetsrelaterade sådana. Arbetskrav har ofta kunnat bevisas ha en negativ koppling, medan arbetsresurser har kunnat bevisas ha en positiv koppling till både arbetsengagemang och balansen mellan arbetsliv och övrigt liv (Hakanen et al., 2008; Haar et al., 2019). Arbetsresurser har kunnat konstateras ha både en skyddande och berikande effekt på båda välbefinnandeutfallen (Bakker et al., 2007; Haar et al., 2019).

Socioekonomiska faktorer har studerats i begränsad utsträckning, speciellt vad gäller deras koppling till arbetsengagemang. Den forskning som finns tyder ändå på att dessa faktorer spelar en viktig roll för båda välbefinnandeutfallen och att det finns skäl för vidare forskning. Till exempel verkar makroekonomiska förhållanden samt statsskick och kultur kunna spela in på både arbetsengagemang och balansen mellan arbetsliv och övrigt liv (Cahill et

al., 2015; Schaufeli, 2018; Lyness & Kropf, 2005). Studier har också kunnat demonstrera skillnader mellan länder i nivåer av både arbetsengagemang och balansen mellan arbetsliv och övrigt liv (Schaufeli, 2018; Lunau et al., 2014).

Förutom underliggande faktorer till arbetsengagemang och balansen mellan arbetsliv och övrigt liv har forskningen också intresserat sig för kopplingen mellan dessa två nyckelaspekter av välbefinnande på arbetsplatsen. Medan de står klart att det finns en koppling, är forskare fortfarande oense om denna koppling är positiv eller negativ (Wood et al., 2020). I enlighet med konfliktperspektivet har viss forskning tytt på att balans och engagemang är inkompatibla eftersom en individ har begränsat med tid och energi och engagemang i en sfär stjälar således energi från den andra sfären (Greenhaus & Beutell, 1985; Montgomery et al., 2003). Arbets- och familjeroller har också ansetts kunna berika varandra, genom att positiva upplevelser och känslor i en sfär kan överföras till den andra. Denna förklaring har använts av forskare som demonstrerat en positiv koppling mellan begreppen (Rothbard, 2001; Niessen et al., 2018; Haar et al., 2019). Sammantaget kan man säga att tidigare forskning tyder på att det finns en intressant koppling mellan begreppen, och att speciellt underliggande, breda och kontextuella faktorer borde studeras i högre grad för att avancera forskningen inom dessa fält.

Interventionsforskning utgör en viktig del av forskning om psykiskt välbefinnande på arbetsplatsen. Interventioner som görs inom forskningsfältet kan se olika ut. Dessutom kan interventioner med tyngdpunkt på exempelvis ledarskapsutveckling, teambyggande eller främjandet av en hälsosam livsstil påverka det mentala välbefinnandet hos deltagarna, även i de fall där detta inte var interventionens primära syfte. Eftersom psykiskt välbefinnande är ett brett begrepp kan de flesta interventioner inom detta fält antas förbättra en eller några aspekter av psykiskt välbefinnande men inte alla. När det gäller interventioner utförda i en arbetsplatskontext kan det också vara svårt att skilja på effekten av arbetsrelaterade och icke-arbetsrelaterade faktorer. Ytterligare en distinktion kan göras mellan interventioner som är avsedda att förhindra ohälsa (till exempel stressinterventioner) och interventioner som är avsedda att främja hälsa och välbefinnande (till exempel resursutvecklande interventioner).

Forskare tycks dock kunna enas om att en intervention vars syfte är att främja välbefinnande på arbetsplatsen involverar ett planerat, teoribaserat agerande, som utförs endera för att minimera eller modifiera orsaker till ohälsa eller att främja välbefinnande (till exempel Nielsen et al., 2010; Torp et al., 2011; Briner & Walshe, 2015). Intresset för den här typen av interventioner

har ökat på senare tid, både inom positiv psykologi och mental hälsopromotion. Forskare från båda fälten brukar vanligtvis göra en grov distinktion mellan interventioner som försöker påverka det mentala välbefinnandet genom åtgärder uppifrån och ner och nerifrån och upp. Interventioner där insatser görs uppifrån och ner är initierade och drivna av den seniora ledningen, och ofta med intentionen att göra ändringar som omfattar hela organisationen. I interventioner som görs nerifrån och upp betonas arbetstagarnas deltagande och egenmakt eftersom dessa interventioner är drivna av individuella arbetstagare och är avsedda att göra förändringar som påverkar dem själva och deras omedelbara arbetsmiljö (Hanson, 2007; Hornung et al., 2010).

Däremot skiljer sig de två forskningsfälten åt gällande de startpunkter, koncept och teorier som ligger till grund för interventionsforskningen. Till exempel utgår forskning inom positiv organisationspsykologi från individen medan forskning inom hälsopromotion på arbetsplatsen utgår från rollen av fysiska, sociala och organisatoriska faktorer. Ett ökat användande av ett integrativt förhållningssätt vore önskvärt.

Tidigare översikter visar att JD-R-modellen är det mest förekommande teoretiska ramverket i interventioner avsedda att främja arbetsengagemang (Bailey et al., 2017; Knight et al., 2017/2019). En översikt av Knight et al. (2017) inkluderade en meta-analys, där en liten men positiv interventionseffekt på arbetsengagemang kunde demonstreras. Den senare översikten av Knight et al. (2019) visade att ungefär hälften av interventionerna kunde uppvisa en positiv effekt på arbetsengagemang, och ett nyckelresultat var också att interventioner genomförda nerifrån och upp var mest framgångsrika. I den första översikten ingick 20 interventioner, och i den andra 40.

När det gäller interventioner avsedda att främja balansen mellan arbetsliv och övrigt liv är dessa betydligt färre till sitt antal än de föregående. I en översikt av interventioner avsedda att främja balansen mellan arbetskrav och krav i hemmet kunde ett tiotal interventioner identifieras varav cirka hälften använde sig av slumpmässiga grupper för att mäta interventionseffekten (Brough & O'Driscoll, 2010). I denna översikt kunde det konstateras att interventionerna generellt sett hade en positiv effekt på balansen mellan arbetsliv och övrigt liv samt övriga välbefinnandeaspekter. Några år senare publicerades översikten av Ropponen et al. (2016), där studier publicerade mellan 2000 och 2015 samlades, alla med fokus på interventioner genomförda på arbetsplatsen avsedda att främja balansen mellan arbetsliv och övrigt liv. Den vanligaste interventionstypen hos dessa är den som är fokuserad på

organisationsutveckling eller träning av färdigheter, såsom ledarskapsträning. Ropponen et al. (2016) kunde i sin översikt konstatera att interventioner fokuserade på flexibel arbetstid och andra flexibla lösningar samt stöd från förmannen i möjligheten att ha ett fungerande familje- och privatliv vid sidan av arbetet effektivt främjade förenligheten mellan arbete och övrigt liv, och dessutom förde detta med sig positiva effekter på andra välbefinnandeaspekter hos arbetstagarna, såsom deras fysiska hälsa, stressnivåer och arbetstillfredsställelse.

12.3 Syfte

Syftet med den här avhandlingen var att:

- studera samband mellan familjens inverkan på arbetet (FIW)/arbetets inverkan på familjen (WIF) och utvalda psykosociala risk- och stödfaktorer i arbets- och familjemiljöerna inom finländska arbetande familjer (Studie 1)
- studera samband mellan balans mellan arbetsliv och övrigt liv och upplevd psykosocial arbetsmiljö (arbetskrav och socialt stöd på arbetsplatsen), samt familjelivsskede hos finländska arbetstagare, med speciellt fokus på familjelivsskeden innefattande omvårdnad av små barn (Studie 2)
- undersöka samband mellan arbetsengagemang och balansen mellan arbetsliv och övrigt liv i en bred skara av europeiska välfärdsstater, samt att studera huruvida balansen mellan arbetsliv och övrigt liv varierar i europeiska länder och om denna variation kan förklaras av välfärdsregim, efter att bakgrundsfaktorer på individnivå kontrollerats för
- genomföra en systematisk översikt och meta-analys för att syntetisera evidensbasen av interventioner fokuserade på att främja arbetsengagemang genom att utveckla arbetsplatsresurser nerifrån och upp (Studie 4)

12.4 Metod

I Studierna 1–3 användes intervjuenkätdata från två olika populationsbaserade, tvärsnittsstudier. Medan Studie 1 och 2 baserades på data från den upprepade Arbetsmiljöundersökningen i Finland (eng. Quality of working life, QWLS) insamlat år 2018, baserades Studie 3 på den upprepade enkäten om arbetsförhållanden i Europa (eng. European Working Conditions Survey, EWCS) insamlat år 2015. Den finländska enkäten riktades till deltagare i åldrarna 15–67 år som kunde identifieras som löntagare i arbetsförhållande och som jobbade minst 10 h per vecka. Sammanlagt deltog 4110 deltagare och svarsprocenten var 66,8 %. Ytterligare inkluderingskriterier tillämpades i både

Studie 1 och 2 i enlighet med syftena för studierna, vilket resulterade i studiesampel med 1431 (Studie 1) respektive 3790 (Studie 2) deltagare. Den europeiska enkäten, vars data användes i Studie 3, riktades till arbetsföra deltagare i åldrarna 15 och uppåt, där deltagare från sammanlagt 35 länder inkluderades. Originalsmplet bestod av 43 850 deltagare, vilket gav en svarsprocent på 42,5 %. Svarsprocenten varierade dock mycket mellan de inkluderade länderna. I enlighet med syftet i Studie 3 tillämpades ytterligare inkluderingskrav, vilket gav ett sampel på 35 401 inkluderade deltagare.

Studie 1 inkluderade variablerna konflikt mellan arbets- och familjeliv, psykosociala risk- och stödfaktorer (tre arbetsrelaterade och tre familjerelaterade krav, två arbetsrelaterade och två familjerelaterade stödfaktorer), sociodemografiska faktorer och arbetsplatskaraktäristika. Studie 2 inkluderade följande variabler: balansen mellan arbetsliv och övrigt liv, faktorer relaterade till den psykosociala arbetsmiljön (arbetskrav och socialt stöd på arbetsplatsen), familjelivsskede (kategorisering enligt Hill et al. 2008) samt bakgrundsfaktorer. Studie 3 inkluderade också balansen mellan arbetsliv och övrigt liv, därtill även arbetsengagemang, välfärdsregim och bakgrundsfaktorer.

Gällande de statistiska analyserna i Studie 1–3 utfördes först grundläggande deskriptiva analyser. (Binär) logistisk regressionsanalys tillämpades därefter i Studie 1 och 2. Två typer av multinivå regressionsanalys – linjär och logistisk – tillämpades i Studie 3. I samtliga av dessa studier användes regressionsanalyser för att analysera sambandet mellan de beroende variablerna (FIW och WIF i Studie I, balansen mellan arbetsliv och övrigt liv i Studie II and i den logistiska analysen i Studie 3, arbetsengagemang i den linjära analysen i Studie 3) och de oberoende variablerna. I Studierna 1 och 2 utfördes analyserna i en stegvis process med tre modeller vardera, dessutom utfördes analyserna separat för män och kvinnor i Studie 2. I Studie 3 utfördes multinivå linjär regressionsanalys med alla oberoende variabler inkluderade i en och samma modell (efter att en random intercept-modell först körts), och multinivå logistisk regressionsanalys i en stegvis process med tre modeller (varav den första var random intercept-modellen). I båda fallen genomfördes först en analys med båda könen inkluderade och därefter separata analyser för män och kvinnor.

Studie 4 var en systematisk översikt och meta-analys över interventionsstudier. I denna studie efterföljdes riktlinjerna som har presenterats i PRISMA-redogörelsen till den grad som dessa kan tillämpas i icke-medicinsk forskning (Moher et al., 2009). Systematiska sökningar

utfördes i sju internationella, vetenskapliga bibliografiska databaser. Sökningarna gjordes under perioden 25.9–14.10.2020. Samma sökningar upprepades 22–23.2.2021 för att inkludera träffar från slutet av år 2020.

I enlighet med PICOS-angreppssättet fastställdes en rad inkluderingskriterier: interventionspopulationen skulle vara arbetstagare, interventionen skulle vara avsedd att utveckla arbetsplatsresurser nerifrån och upp, jämförelsegrupp, om sådan fanns, skulle inte motta någon intervention eller så skulle de motta en annan intervention, det primära utfallet för interventionen skulle vara generellt arbetsengagemang eller en av dess delkomponenter och arbetsengagemang skulle mätas med hjälp av UWES. Studiedesignen tilläts vara kvantitativ, kvalitativ eller kombinerad. Dessutom sattes en rad andra inkluderingskriterier utöver de som specificerats med hjälp av PICOS, exempelvis att studierna skulle vara publicerade i en referentgranskad, etablerad forskningstidskrift, rapporten skulle vara skriven på engelska och de undersökta interventionerna behövde vara slutförda. Meta-analysen var baserad på en del av studierna som inkluderats i den systematiska översikten. För att inkluderas i meta-analysen förutsattes att studierna inkluderade en kontrollgrupp och att giltig information uppgavs som möjliggjorde beräkandet av sammanvägda effektstorlekar (alternativt kunde denna information vara tillgänglig via andra källor än den aktuella rapporten).

Urvalsprocessen innefattade flera steg. Först genomfördes en genomläsning av alla abstrakt, och om studien fortfarande ansågs lämplig att inkludera efter detta steg gick den vidare till nästa steg som bestod av en genomläsning av hela studien. Om författarna bedömde en artikels lämplighet olika, hölls en diskussion tills samstämmighet uppnåddes. Författarna diskuterade också vilken information som skulle kodalas (till exempel författare, årtal, metod, studiekontext och nyckeltal) och hur studierna skulle kategoriseras. En kvalitetsbedömning genomfördes med utgångspunkt i intern och extern validitet. Interventionernas effektstorlekar på arbetsengagemang kalkylerades för meta-analysen med hjälp av Review Manager 5.4.1. software (The Cochrane Collaboration, 2020).

12.5 Resultat och diskussion

I enlighet med det övergripande syftet för avhandlingen försåg Studierna 1–3 oss med information om stöd- och skyddsfaktorer som kan kopplas till balansen mellan arbetsliv och övrigt liv, arbetsengagemang samt sambandet mellan dessa två välbefinnandeutfall.

Över lag rapporterades höga nivåer av balansen mellan arbetsliv och övrigt liv samt arbetsengagemang i de finländska (Studie 1 och 2) och europeiska (Studie 3) välfärdskontexterna. I Studie 1 visade resultaten att en relativt stor andel av deltagarna rapporterade avsaknad av FIW/WIF (cirka en tredjedel i båda fallen). I Studierna 2 och 3 jämfördes den grupp av respondenter som rapporterade att de hade god balans mellan arbetsliv och övrigt liv med den grupp av respondenter som rapporterade något av de andra alternativen. Cirka en tredjedel av respondenterna rapporterade god balans mellan arbetsliv och övrigt liv. Medan en god balans var något mer vanlig bland män i Studie 2 (finskt sampel), var motsatsen sann i Studie 3 (europeiskt sampel). Medan de deskriptiva resultaten av Studierna 2 och 3 möjligen kan anses vara en bättre indikation på den rapporterade nivån av balansen mellan arbetsliv och övrigt liv generellt sett, försåg Studie 1 oss med information om specifika aspekter av balansen mellan arbetsliv och övrigt liv. En hög nivå av arbetsengagemang i Europa rapporterades i Studie 3.

Sociodemografiska bakgrundsfaktorer var inte huvudfokus i denna avhandling, men inkluderades som kontrollvariabler i Studierna 1–3. Dessutom genomfördes separata körningar för kön i Studierna 2 och 3. Ålder, kön och distansarbete identifierades vara kopplade till FIW i Studie 1, där deltagare i åldrarna 35–44 hade mindre sannolikhet att rapportera att de upplevde avsaknad av FIW än deltagare i åldrarna 20–34, medan män och arbetstagare som inte hade distansjobb hade större sannolikhet att rapportera avsaknad av FIW än kvinnor och arbetstagare med distansjobb. Däremot kunde inga bakgrundsfaktorer kopplas till WIF i Studie 1. I Studie 2 avslöjade regressionsanalyserna att ingen av de två bakgrundsvariablerna (arbetsstatus och sambo) var statistiskt signifikanta för män i någon av modellerna, medan kvinnor som jobbade deltid hade högre sannolikhet att rapportera god balans mellan arbetsliv och övrigt liv i Modellerna 1 och 2 än kvinnor som jobbade heltid. I Studie 3 presenterades resultaten för bakgrundsvariablerna i den logistiska regressionsanalysen på multinivå, som visade att hög utbildningsbakgrund, att vara en äldre arbetstagare utan sambo och barn i hushållet, deltidsarbete, förmansposition och att vara den mest betydande bidragaren till hushållets inkomst medförde en större sannolikhet att rapportera god balans mellan arbetsliv och övrigt liv.

Även om bakgrundsfaktorer kan spela en viktig roll för psykiskt välbefinnande på arbetsplatsen ger forskningen sällan uppmärksamhet till deras eventuella påverkan. Däremot har en hel del myter florerat gällande bakgrundsfaktorer och deras koppling till välbefinnande på arbetsplatsen.

Till exempel är en välspredd myt bland forskare att äldre arbetstagare skulle vara mindre engagerade i arbetslivet (Kim & Kang, 2017), medan de har antagits ha både mer och mindre sannolikhet att uppleva god balans mellan arbetsliv och övrigt liv i jämförelse med yngre arbetstagare (Staudinger & Bluck, 2001; Staudinger & Bluck 2001; Hill et al., 2014). Den forskning som finns gällande ålder och både engagemang och balans mellan arbetsliv och övrigt liv tyder dock på en svag men positiv koppling (till exempel Schaufeli et al., 2006; Ramos et al., 2016; Lepistö et al., 2018; Crompton & Lyonette, 2006; Spieler et al., 2018; Richert-Kaźmierska & Stankiewicz, 2016). Resultat erhållna i denna avhandling ger inte heller några belägg för dessa åldersrelaterade myter.

Den begränsade forskningen om kopplingen mellan kön och välbefinnande har gett utrymme för diverse myter och antaganden att breda ut sig även här. Inom forskningen verkar viss evidens finnas för att det ska finnas en svag till moderat koppling mellan kön och balansen mellan arbetsliv och övrigt liv. I en meta-analys rapporterade Byron (2005) att män tenderar att uppleva en större negativ inflytelse av arbetet på familjelivet, medan kvinnor verkar uppleva en större negativ inflytelse i motsatt riktning, men de identifierade skillnaderna var små. Enligt en relativt färsk meta-analys är likheterna mellan könen fler än skillnaderna. Ett nyckelresultat var dock att mödrar tenderar rapportera mer FIW än fäder (Shockley et al., 2017).

Det här stämmer väl överens med resultaten i Studie 1, eftersom män hade större sannolikhet för att uppleva avsaknad av FIW än kvinnor i en grupp där enbart deltagare med barn i hushållet deltog. Dessutom pekar resultaten i Studie 2 på att balansen mellan arbetsliv och övrigt liv upplevs annorlunda av finländska män och kvinnor i olika familjelivsskeden. Sambandet mellan balansen mellan arbetsliv och övrigt liv och familjelivsskede har sällan blivit studerat i tidigare forskning (Baltes & Young, 2007), men resultaten av en kvalitativ studie har illustrerat att livsloppet och hur detta hör ihop med balansen mellan arbetsliv och övrigt liv kan skilja sig åt för män och kvinnor. Mer specifikt har det framkommit att kvinnor upplever att de balanserar olika delar av livet och flera olika roller också i familjelivsskeden som inte inkluderar omvårdnad av barn i hemmet, medan det här balanserandet koncentreras till familjelivsskeden som involverar omvårdnad av barn för män (Emslie & Hunt, 2009). Studie 2 presenterade resultat som strider mot detta, eftersom ett statistiskt signifikant samband mellan familjelivsskede och balansen mellan arbetsliv och övrigt liv hittades för finländska kvinnor men inte för finländska män. I detalj visade Studie 2 att i jämförelse med kvinnor i åldern 45 eller äldre

utan omyndiga barn i hemmet (familjelivsskede 5), var kvinnor i de tidigare familjelivsskedena mindre sannolika att rapportera god balans mellan arbetsliv och övrigt liv och det här gällde framför allt kvinnor med små barn i hemmet (familjelivsskedena 2 och 3). Resultaten av Studie 2 indikerar därmed att det finns skillnader mellan kvinnor och män i hur balansen mellan arbetsliv och övrigt liv är kopplad till familjelivsskede, men hur denna koppling tar sig till uttryck skiljer sig från vad som tidigare rapporterats i den internationella litteraturen.

Det här belyser en jämställdhetsproblematik i den finländska – och nordiska – arbetslivskontexten. Medan tidigare forskning om psykiskt välbefinnande i Finland och Norden har lyft jämställdhet som en viktig fråga, är denna avhandling bland de första att lyfta det skriande behovet av att flytta fokus när det kommer till främjande av jämställdhet. Tidigare forskning har främst lyft behovet av att främja jämställdhet i arbetslivet genom att främja kvinnors möjligheter till karriär och arbete. Resultaten i Studie 1 visar att detta arbete verkar ha en god effekt, eftersom inga könsskillnader fanns i WIF. Däremot finns fortfarande könsskillnader i FIW (Studie 1), och kvinnors (men inte mäns) sannolikhet att uppleva god balans mellan arbetsliv och övrigt liv är mindre i de livsskedena som inkluderar omvårdnad av små barn (Studie 2). Sammantaget bevisar resultaten av Studierna 1 och 2 att jämställdhetsproblematiken fortfarande finns i den psykosociala familjekontexten och att det här medför mindre chanser för kvinnor att återhämta sig efter jobbet där hemma, vilket är viktigt för deras bibehållna arbetsengagemang (Sonnentag, 2003). Mäns engagemang i oavlönat arbete i hemmet borde därför främjas genom aktiva stödinsatser (Schulstok & Wikstrand, 2020).

Resultaten av Studie 1 och 2 gav också information om sambanden mellan psykosociala arbets- och familjerelaterade faktorer samt balansen mellan arbetsliv och övrigt liv. Flera nyckelvariabler kunde identifieras i den psykosociala arbetsmiljön. Till exempel var olika arbetskrav kopplade till sämre balans mellan arbetsliv och övrigt liv. I Studie 1 var alla studerade arbetskrav (det vill säga arbetsbörda, övertid och arbetstakt) kopplade till högre nivåer av konflikt mellan arbetsliv och familjeliv. I Studie 2 medförde högre poäng på skalan som mätte arbetskrav mindre sannolikhet att uppleva en god balans mellan arbetsliv och övrigt liv. De här resultaten är samstämmiga med tidigare forskning. Flera litteraturöversikter visar att arbetskrav hindrar olika aspekter av välbefinnande på arbetsplatsen (till exempel Christian et al., 2011; Halbesleben, 2010; Crawford et al., 2010; Brough et al., 2020; Sirgy &

Lee, 2018). Tidigare forskning riktad till den finländska arbetskontexten är inget undantag (se till exempel Saari et al., 2017). Resultaten av den här avhandlingen stöder således till stora delar tidigare studier som gjorts på området där man hittat att psykosociala arbetskrav är centrala för det mentala välbefinnandet på arbetsplatsen. Utöver detta bidrar Studie 1 med ett resultat kopplat till sambandet mellan arbetskrav och konflikt mellan arbetsliv och familjeliv. Även om det är vida känt att arbete kan påverka familjelivet och tvärtom, tenderar fortfarande många studier att ta fasta på enbart endera riktningen (till exempel Tammelin et al., 2017) eller kombinera de två riktningarna i en och samma beroende variabel (till exempel Mauno et al., 2013). Genom att hålla WIF och FIW som separata variabler kunde det i Studie 1 demonstreras att arbetskrav är mer ofta kopplade till WIF än till FIW i den finländska arbetskontexten. Detta resultat stöder resultaten av Kinnunen och Mauno (1998).

Studie 1 och 2 undersökte också hur socialt stöd på arbetsplatsen kan kopplas till balansen mellan arbetsliv och övrigt liv men inga definitiva slutsatser kan dras om betydelsen av socialt stöd på arbetsplatsen. Socialt stöd verkade inte spela en central roll i Studie 1, och dessutom var den effekt som påträffades motsatsen till den antagna. Det visade sig nämligen att de som ofta upplevde stöd av sin förman hade mindre sannolikhet att rapportera avsaknad av FIW. Socialt stöd visade sig ha en positiv koppling till balansen mellan arbetsliv och övrigt liv i Studie 2 för båda könen och i samtliga modeller. Dessa tvetydiga resultat av Studie 1 och 2 hänger sannolikt ihop med hur variablerna operationaliserats. Resultaten i Studie 2 är mera i linje med tidigare forskning än resultaten i Studie 1, och visar att socialt stöd har en viktig betydelse för balansen mellan arbetsliv och övrigt liv (till exempel Bakker et al., 2007; Byron, 2005; French et al., 2018).

I tillägg till psykosociala faktorer i arbetsplatskontexten undersöktes även faktorer i familjekontexten i denna avhandling, och även här hittades samband med välbefinnande på arbetsplatsen. I Studie 1, som fokuserade på konflikten mellan arbetsliv och familjeliv, mättes familjerelaterade krav i termerna av huruvida familjeansvar har medfört en minskning av arbetsuppgifter, deltidsarbete eller vägran att ta emot högre arbetskrav. Det här betyder att Studie 1 gick ett steg längre än de flesta tidigare studier där familjerelaterade krav främst mätts i termerna av antalet och åldern av barn i hemmet (Annor, 2016). Av resultaten kunde utläsas att minskandet av arbetsuppgifter på grund av familjerelaterade krav var ensam med att ha en inverkan på WIF, medan inget av de familjerelaterade kraven hade en inverkan på FIW. Två stödfaktorer

i familjekontexten undersöktes också: familjestöd och stöd från närstående. Genom att inkludera två stödfaktorer kunde de olika stödformernas influenser särskiljas i Studie 1 och därmed skiljde sig Studie 1 från flera tidigare studier som enbart intresserat sig för en stödfaktor och sfär i gången. Familjestöd visade sig ha en roll för både FIW och WIF, medan stöd från närstående inte tycktes spela någon roll för någotdera utfallet.

Som noterats ovan studerades sambandet mellan balansen mellan arbetsliv och övrigt liv och upplevd psykosocial arbetsmiljö (arbetskrav och socialt stöd på arbetsplatsen), samt familjelivsskede hos finländska arbetstagare i Studie 2. Det här gör Studie 2 till en av de första nordiska studierna att inkludera familjelivsskede som en variabel i en empirisk studie av mentalt välbefinnande på arbetsplatsen. Åtminstone en tidigare studie har studerat mentalt välbefinnande på arbetsplatsen ur ett livsskedesperspektiv, fokus låg i den studien på arbetsengagemang och utmattningssyndrom (Salmela-Aro & Upadyaya, 2018). Dock baserades livsskede enbart på arbetstagarens kronologiska ålder i den studien, och även om vissa skillnader mellan livsskeden kunde hittas i studien, var likheterna större än skillnaderna, sannolikt på grund av användandet av ålder som proxy för livsskede (Salmela-Aro & Upadyaya, 2018). Genom att tillämpa familjelivsskedekategorin av Hill et al. (2008) kunde komplexiteten i livsskeden beaktas i högre grad än i tidigare studier där livsskedemodeller enbart baserats på arbetstagarens kronologiska ålder (Demerouti et al., 2012). Som nämnts kunde statistiskt signifikanta skillnader identifieras mellan familjelivsskedena för kvinnor (inte för män) i Studie 2, och speciellt visade det sig att kvinnor i familjelivsskeden som involverar omvårdnad av små barn har minst sannolikhet att uppleva god balans mellan arbetsliv och övrigt liv. Det här resultaten belyser vikten av att betrakta familjelivsskede som en psykosocial faktor i familjekontexten i studier av balansen mellan arbetsliv och övrigt liv, samt vikten av att beakta komplexiteten i familjelivsskeden, vilket görs genom att basera denna variabel på mer än bara ålder.

Genom att studera både arbetsrelaterade och familjerelaterade psykosociala faktorer bidrog denna avhandling till forskning om psykiskt välbefinnande på arbetsplatsen generellt och speciellt till den forskning som berör balansen mellan arbetsliv och övrigt liv. Mer specifikt kan bidraget anses vara att faktorer ur båda kontexterna studerades parallellt. Det kan också konstateras att resultaten gällande de familjerelaterade faktorerna var mer tvetydiga än de resultat som gällde de arbetsrelaterade faktorerna. Dessutom kan man ur resultaten i Studie 1 utläsa att de arbetsrelaterade faktorerna hade

en starkare koppling till WIF än till FIW, medan de familjerelaterade faktorerna var ungefär lika starkt kopplade till WIF och FIW. Detta är samstämmigt med tidigare meta-analyser som gjorts på fältet (Byron, 2005; French et al., 2018).

I den här avhandlingen har psykiskt välbefinnande på arbetsplatsen inte enbart betraktats som ett fenomen som formats av bakgrundsfaktorer och psykosociala faktorer i arbets- och familjekontexterna, men också av socioekonomiska faktorer. Genom att tillämpa multinivåanalyser i Studie 3 där variationen mellan länderna tagits med i beräkningarna, och genom att inkludera välfärdsregim som en faktor i den logistiska multinivåanalysen, argumenterades det för att den vidare kulturella och politiska kontexten har en inverkan på psykiskt välbefinnande på arbetsplatsen (Bambra & Eikemo, 2009). I enlighet med detta argument visade resultaten av den linjära multinivåanalysen att det fanns en variation i arbetsengagemang mellan de europeiska länderna. Dessutom kunde Studie 3 påvisa att ett positivt samband finns mellan balansen mellan arbetsliv och övrigt liv och arbetsengagemang på europeisk nivå. Det här innebär att Studie 3 var den första jämförelsestudien att använda sig av multinivåmodeller i analysen av samband mellan balansen mellan arbetsliv och övrigt liv och arbetsengagemang. Dessa resultat är således mer robusta och möjliga att använda sig av i en större skara länder i jämförelse med resultaten av tidigare studier som baserat sig på mindre data och vanligtvis från enskilda länder (till exempel Rothbard, 2001; Niessen et al., 2018).

Resultaten av den logistiska multinivåanalysen visade också att det fanns en variation mellan länderna avseende balansen mellan arbetsliv och övrigt liv. Välfärdsregim förklarade en del av variationen mellan länderna. Eftersom inte enbart arbetsuppgifternas natur har förändrats men också arbetsvillkoren, är det oproportionerliga fokus som arbetskaraktäristika fått i forskningen anmärkningsvärd (De Moortel et al., 2014). Välfärdsregim har demonstrerats ha en påverkan på psykiskt välbefinnande i de få tidigare studier som beaktat den bredare, socioekonomiska kontexten men dessa tidigare studier har gemensamt att de har anammat ett riskperspektiv med fokus på de negativa aspekterna av psykiskt välbefinnande (De Moortel et al., 2014; Lunau et al., 2014; Mensah & Adjei, 2020). Studie 3 var en av de första att inkludera välfärdsregim och fokusera på en positiv aspekt av psykiskt välbefinnande på arbetsplatsen, vilket breddar det traditionella fokuset på risker till att inkludera även stödfaktorer (Schulte & Vainio, 2010).

Ett nyckelresultat i Studie 3 var relaterat till sambandet mellan välfärdsregim och balansen mellan arbetsliv och övrigt liv. Medan det

förväntades att den nordiska välfärdsregimen skulle sticka ut i positiv bemärkelse när det gäller främjandet av balansen mellan arbetsliv och övrigt liv (Crompton & Lyonette, 2006), hade inte arbetstagarna i Norden större sannolikhet att rapportera en god balans mellan arbetsliv och övrigt liv än arbetstagarna i de konservativa och liberala välfärdsregimerna. Däremot var de manliga arbetstagarna i södra Europa och CEE-länderna mindre sannolika att rapportera balans mellan arbetsliv och övrigt liv än de manliga arbetstagarna i Norden, och detta var även sant för de kvinnliga arbetstagarna men enbart i södra Europa. Utöver välfärdsregim kunde fortsatta studier om balansen mellan arbetsliv och övrigt liv specifikt och om psykiskt välbefinnande på arbetsplatsen över lag beakta andra socioekonomiska faktorer, såsom institutionella och makroekonomiska faktorer.

Det bör betonas att det inte går att dra några definitiva slutsatser gällande sambandens riktning på basis av resultaten i Studie 1–3, eftersom dessa studier är baserade på tvärsnittsdata. Däremot kan det på basis av resultaten i meta-analysen i Studie 4 dras slutsatser gällande interventionernas sammanvägda effektivitet på arbetsengagemang, eftersom dessa interventioner innehöll kvalificerade före- och eftermätningar.

Historiskt sett har interventioner som genomförts uppifrån och ned varit betydligt mer vanliga när det gäller interventioner vars syfte är att främja psykiskt välbefinnande på arbetsplatsen (Briner & Reynolds, 1999; Nielsen, 2013). Rätt få av dessa har visat sig vara effektiva (Balogun & Hope Hailey, 2004) samtidigt som organisationer har allt mindre tid att skapa resursfulla arbetsmiljöer åt sina arbetstagare (Grant & Ashford, 2008; Bakker, 2017). Med detta som bakgrund har interventioner som genomförs nerifrån och upp varit vägen framåt för interventionsforskningen. Även om denna typ av interventioner generellt sett medfört lovande resultat (Meyers et al., 2013; Demerouti et al., 2019), har deras sammanvägda effektivitet förblivit oklar, vilket begränsat evidensen som framtida interventioner kan utgå ifrån. Den meta-analys som presenterades i Studie 4 bevisade att det fanns en sammanvägd interventionseffektivitet på arbetsengagemang. I meta-analysen inkluderades resultaten av 24 resursutvecklande interventioner genomförda nerifrån och upp. Erhållna resultat bygger vidare på den tidigare forskning som finns. Till exempel visade meta-analysen av Knight et al. (2017) liknande resultat, men den studien var inte specifikt fokuserad på interventioner genomförda nedifrån och upp och baserades dessutom på ett mindre antal studier.

Ett nyckelresultat i Studie 4 var att även om både universella och skraddarsydd interventioner hade en statistisk signifikant effekt på arbetsengagemang, visade sig universella interventioner vara mer lovande än skraddarsydd. Det här är intressant, eftersom interventionsforskare tidigare har getts rådet att skraddarsydd interventioner för ökad effektivitet på mentala välbefinnandeutfall (till exempel Baumeister & Alghamdi, 2015). Det är sannolikt att interventioner bör vara skraddarsydd i en betydligt högre grad än i de fall som inkluderades i meta-analysen för att effektiviteten i dessa ska överstiga effektiviteten av universella interventioner.

Att utvärdera interventionseffektivitet sträcker sig längre än till traditionell statistisk analys och inkluderar den omsorgsfulla utvärderingen av faktorer som kan ha påverkat interventionsprocessen och -implementeringen (Nielsen et al., 2010; Nielsen, 2013; Abildgaard et al., 2016). Det här är viktigt att lyfta eftersom kritik har riktats mot resursbaserade interventioner och tillhörande metodologiska brister och risker av partiskhet (Briner & Walshe, 2015). I linje med detta visade kvalitetsutvärderingen i Studie 4 att mer än hälften av interventionerna kunde beskrivas ha moderat risk för partiskhet. Till exempel var det vanligt att de inkluderade interventionerna rapporterade användandet av självskattningar. Samtidigt är det viktigt att komma ihåg att forskning ute på fältet tampas med praktiska begränsningar och det kan vara svårt att uppnå en ideal interventionsdesign.

12.6 Slutsatser

Det övergripande syftet i den här avhandlingen var att undersöka stöd- och skyddsfaktorer som kan kopplas till två nyckelaspekter av psykiskt välbefinnande på arbetsplatsen: arbetsengagemang och balansen mellan arbetsliv och övrigt liv. Dessutom var syftet att studera huruvida dessa två aspekter av välbefinnande är sammankopplade, såväl som att samla evidens för effektiviteten av interventioner där individuella strategier för att skapa arbetsengagemang genom att utveckla resurser nerifrån och upp främjas. Fyra artiklar presenterades inom ramen för denna avhandling. Över lag visar resultaten tydligt att ett systemorienterat arbetssätt behövs, där faktorer på flera nivåer beaktas i främjande av psykiskt välbefinnande på arbetsplatsen. Det här innebär att inte vara bakgrundsfaktorer, psykologiska och psykosociala faktorer i arbetskontexten borde beaktas i positiv organisationspsykologiforskning om psykiskt välbefinnande på arbetsplatsen, men också psykosociala faktorer i familjekontexten samt övergripande, kontextuella faktorer i den socioekonomiska kontexten. Resultaten betonar

också att forskningen behöver bredda det traditionella fokuset på riskfaktorer och negativa aspekter av psykiskt välbefinnande på arbetsplatsen till att inkludera ett fokus på stödfaktorer och positiva aspekter. Användandet av ett integrativt perspektiv där positiv psykologi och hälsopromotion kombinerades visade sig vara en styrka i avhandlingen. Användningen av ett sådant perspektiv kan avancera vår förståelse för psykiskt välbefinnande på arbetsplatsen och hur det på bästa sätt kan stödjas och skyddas i det samtida arbetslivet.

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Article

Reconciling Work and Family Demands and Related Psychosocial Risk and Support Factors among Working Families: A Finnish National Survey Study

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Abstract: Working families commonly struggle with reconciling work and family demands. While the Nordic welfare states have been regarded as forerunners in family-friendly policies, worldwide trends threaten work–family reconciliation also in this context. Therefore, this study aimed to examine the associations between family interference with work (FIW)/work interference with family (WIF) and selected psychosocial risk and support factors in the work and family settings of Finnish working families. Data from the Finnish Quality of Work Life Survey 2018 collected by Statistics Finland were utilized to conduct binary logistic regression analyses (N = 1431). Risk factors in the work setting emerged as key covariates as all of them showed statistically significant associations with WIF or both WIF and FIW. Another key finding was that occasional conflicts within the family were beneficial in the context of both WIF and FIW. To conclude, both distinct and mutual psychosocial risk and support factors of FIW and WIF were identified, at the same time as two socio-demographic factors as well as one workplace factor were identified as covariates specifically of FIW. This study showed that work–family reconciliation is a considerable challenge among Finnish working families, and especially to women.

Keywords: psychosocial support and risk factors; work–family conflict; gender equality; Finland; surveys and questionnaires; regression analysis



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1. Introduction

There is a growing, multidisciplinary research interest in work–family reconciliation [1], and related concepts [2]. Due to worldwide contemporary trends, such as technological advancements, increased cross-national work, and the shift from single-career to dual-career couple households, working families are increasingly exposed to work–family conflict [3–5], which occurs when work and family demands conflict [6]. Most researchers argue that the conflict can be bidirectional [7] since evidence of family interference with work (FIW) and work interference with family (WIF) as related but distinct concepts is growing [8–10].

Work–family conflict is a public health concern demanding research attention due to its multiple outcomes [11], including individual-level mental and physical health problems [12,13], organizational-level absenteeism and turnover intentions [14], and societal-level healthcare costs [15]. While the potential consequences of work–family conflict are well-covered in previous research, less is known about its risk and support factors and their relative associations to FIW and WIF, although this body of literature is continuously growing [4,16–18].

Consistent with conflict theory [6], from which the concepts of WIF and FIW origin, it would be reasonable to expect that psychosocial family factors relate more to FIW

than to WIF, while psychosocial work factors relate more to WIF than to FIW, and socio-demographic factors are equally related to both FIW and WIF since they may simultaneously influence both domains. The notion that work factors are more strongly associated with WIF than with FIW has repeatedly been supported in empirical research, e.g., [1,3,4]. For example, employees who perceive little support from co-workers and superiors report more WIF than FIW, and compared to family support (from family or other close ones in the family domain), work support (e.g., in terms of superior and co-worker support) is more strongly associated with WIF [3,4]. Further, employees who spend more time at work, and who experience task overload and psychological demands (e.g., a high work pace) tend to report more WIF than FIW [3]. In contrast, the empirical evidence on family factors' stronger associations with FIW (as compared to WIF) is less consistent [1,3,4]. For example, while interpersonal conflicts within the family, support from family members and close ones overlap in their associations with FIW and WIF, the time individuals spend on family-related responsibilities and the role conflict they experience (i.e., the presence of competing, incompatible demands which require compromise) have been demonstrated to have stronger links to FIW than to WIF [3,4]. Relative relationship intensities aside, empirically driven studies seem to agree that cross-domain influences exist, suggesting that some work and family factors can influence the individuals' family and work life at the same time [1,3,4,10,19].

While socio-demographic factors have not been identified as significant predictors of FIW/WIF, they influence the associations between psychosocial work and family factors and FIW/WIF [3,10,16]—supporting the use of social categories as covariates in such analyses [20].

To address work–family conflict issues, welfare states have implemented various family-friendly policies, with the Nordic countries positively standing out in international comparisons [21,22]. A characteristic of the Nordic welfare states is the well-established cooperation system existing between the government, employers' organizations, and trade unions [5]. For example, the Nordic countries have been recognized for high-quality publicly funded childcare services, shared and paid parental leave, and flexible work arrangements for parents [5,21,23], resulting in low levels of work–family conflict [21,22]. At the same time, some studies report contradicting findings [24,25], and the Nordic welfare model is increasingly challenged by societal changes as well as criticized for not responding to them [5,23,26]. Taken together, family-friendly policies which have been designed and implemented by communities and work organizations may no longer correspond to contemporary work and family life, and this increasingly applies to the Nordic welfare states as well, warranting studies on the social circumstances and related psychosocial risk and support factors of certain population groups.

From a public health perspective, it is important to acknowledge that societal trends affect population groups differently, exposing them to varying levels of work–family conflict. Research on which particular factors support and hinder work–family reconciliation for couples has been called for, including studies targeting the Nordic context [26]. Romantic relationships are complex, as they have been demonstrated to be associated with enhanced well-being [27] but also stress [28], and in line with often adopted family systems theory [29], it can be argued that family members' demands from work and family are interrelated with each other's working conditions [26]. At the same time, a common assumption in international research is that children intensify the work–family conflict of working families due to increased family demands [1]. Support for this assumption has been found, especially regarding working mothers, since they experience high levels of parental demands [30–32], and working families with young children, since these are the most time-pressed—they simultaneously must earn money and provide childcare [32–34]. Considering that a relatively large proportion of the world population is living in a family with children, in Finland this frequency was 37% in 2020 [35], work–family conflict among working families therefore requires closer attention in research.

Taken together, work–family conflict is increasingly considered a public health concern also in the Nordic countries given that the previously tributed welfare model is now subject to a growing criticism as it fails to meet the needs related to contemporary societal trends. More research is needed, examining what psychosocial factors support and hinder successful work–family reconciliation for population groups with varying social circumstances and related prerequisites, so that future public policies can better address their needs and expectations. Therefore, the aim of this study was to examine the associations between FIW/WIF and selected psychosocial risk and support factors in the work and family settings of Finnish working families. Since disproportionate focus in previous research has been directed to those experiencing interference [1,18], those reporting no interference were in focus in the current study. The bidirectionality in interference was highlighted (WIF and FIW), comparing those who experience no interference with those who experience interference between work and family.

2. Materials and Methods

2.1. Study Design and Data Material

The current study was based on national interview survey data from the Finnish Quality of Work Life Survey 2018 (QWLS) collected by Statistics Finland, a governmental national statistics service provider. The study targeted participants aged 15–67 who were identified as employed wage and salary earners regularly working at least 10 h per week. The interviews were primarily conducted face-to-face (9% were conducted over the phone), and the duration median of the face-to-face interviews was 63 min. The number of persons participating in the QWLS was 4110, giving a response rate of 66.8% [36]. Given the aim of the current study, the inclusion criteria specified that respondents had to live in a household with children under 18 years and be involved in a cohabiting relationship (i.e., married, engaged, or registered partnership). The final number of participants in our study sample was 1431.

2.2. Measures

Two directions of work–family conflict (FIW and WIF) were measured using single-item statements. The dichotomization of these two dependent variables was in line with the study aim, focusing on how the group of respondents reporting no interference distinguished from the group of respondents reporting any or significant interference.

Further, four socio-demographic (chronological age, gender, educational level, and age of children living in the household) and four workplace (temporal work flexibility, spatial work flexibility, employment type, and number of subordinates) characteristics were included in the analysis. The original, dichotomous categorization was kept for gender, temporal work flexibility, and employment type, while the rest of these variables were recoded.

Based on previous empirical research, e.g., [1,3,4], selected psychosocial work and family factors were also included in the analysis. Namely, three risk (overtime, task overload, and work pace) and two support factors (superior support and co-worker support) in the work setting, and three risk (only part-time work, task reduction, and refused more work demands) and two support (family support and support from close ones) factors in the family setting. All risk factors in the work setting as well as the family factor support from close ones were initially scored on Likert-scales and recoded into dichotomous variables, while the original categorization was kept for all other work and family factors.

The recoding process (including original and recoded variables, survey items, and response options) is presented in detail in Supplementary Table S1.

2.3. Statistical Analysis

SPSS version 27 was used to conduct the statistical analyzes. A missing data analysis revealed that the missing values ranged from 0 to 3 (0.002%) for the included variables. The responses ‘not applicable’ and ‘cannot say’ ranged from 4 to 80 (0.3–5.6%) and from 0

to 3 (0–0.2%) respectively. Descriptive statistics were used to report sample characteristics (i.e., frequencies and percentages).

Next, the Pearson's chi-square test was used to conduct between-group comparison of reported WIF and FIW in relation to the included variables. This was followed by binary logistic regression analyzes with reported FIW and WIF as the dependent variables. The regression analyses were conducted manually and stepwise by entering the dependent variables, socio-demographic, and workplace characteristics in step 1, and by adding the psychosocial work and family factors in steps 2 and 3, respectively. The logistic regression analyses were conducted using the Enter method. The results are presented in terms of calculated odds ratios with 95% confidence intervals. The models' goodness of fit is estimated by Hosmer and Lemeshow goodness-of-fit test.

3. Results

3.1. Descriptive Statistics

Study sample characteristics are presented in Table 1 (work–family conflict, socio-demographic, and workplace characteristics) and supplementary Table S2 (psychosocial work and family factors). With regards to the socio-demographic characteristics, the study sample ($N = 1431$) consisted of 741 (51.8%) women and 690 (48.2%) men, respondents aged 35–44 represented the largest age group (46.1%), while respondents aged 55–67 represented the smallest (4.2%), and there was an even distribution between low (52.4%) and high (47.6%) educational level. The socio-demographic and workplace characteristics of the current sample were distributed in similar ways as in the total QWLS-sample ($N = 4110$). Further, all correlations between variables included in the model were below 0.70 ($p < 0.05$). This revealed no signs of significant multicollinearity problems, which correlations above 0.80 tend to indicate [37].

Table 1. Overview of the study sample according to variables measuring work–family conflict and socio-demographic and workplace characteristics. $N = 1431$.

Variable	Response Category	N (%)
<i>Work–family conflict</i>		
Family interference with work (FIW)	Reported FIW	963 (67.4)
	Reported no FIW	452 (31.6)
Work interference with family (WIF)	N/A	15 (1.0)
	WIF	1045 (73.1)
	No WIF	378 (26.4)
	N/A	7 (0.5)
<i>Socio-demographic and workplace characteristics</i>		
Age	20–34	284 (19.8)
	35–44	659 (46.1)
	45–54	428 (29.9)
	55–67	60 (4.2)
Gender	Woman	690 (48.2)
	Man	741 (51.8)
Educational level	Low	750 (52.4)
	High	681 (47.6)
Temporal flexibility	Fixed	431 (30.1)
	Flexible	1000 (69.9)
Spatial flexibility	No telework	934 (65.3)
	Telework	497 (34.7)
Employment type	Full-time	1312 (91.7)
	Part-time	116 (8.1)
Number of subordinates	No subordinates	1027 (71.8)
	1–9	233 (16.3)
	10 or more	169 (11.8)
Age of children	0–7 years only	420 (29.4)
	8–17 years only	712 (49.8)
	Mixed	299 (20.9)

Missing data ranged from 0 (0%) to 3 (0.002%) for the included variables. N/A = Not applicable. After initial, descriptive analyses, 'not applicable-', and 'cannot say-' responses were excluded.

Moreover, 31.9% of the respondents in our study sample reported no FIW, and 26.6% no WIF. Table 2 presents the distribution (%) and between-group comparison of socio-demographic and workplace characteristics among participants according to reported FIW/WIF status, and supplementary Table S3 shows the distribution of perceived psychosocial risk and support factors in the work and family settings.

Table 2. The distribution and between-group comparison of socio-demographic and workplace characteristics among participants according to reported family interference with work (FIW)/work interference with family (WIF) status. *N* = 1431.

	FIW (%)	No FIW (%)	χ^2	WIF (%)	No WIF (%)	χ^2
<i>Socio-demographic and workplace characteristics</i>						
Age			$p \leq 0.001$			$p = 0.076$
20–34	178 (63.1)	104 (36.9)		204 (72.1)	79 (27.9)	
35–44	491 (75.1)	163 (24.9)		501 (76.4)	155 (23.6)	
45–54	267 (63.6)	153 (36.4)		302 (71.1)	123 (28.9)	
55–67	27 (45.8)	32 (54.2)		38 (64.4)	21 (35.6)	
Gender			$p \leq 0.001$			$p = 0.051$
Woman	502 (73.5)	181 (26.5)		520 (75.8)	166 (24.2)	
Man	461 (63)	271 (37)		525 (71.2)	212 (28.8)	
Educational level			$p \leq 0.001$			$p \leq 0.001$
Low	463 (62.6)	277 (37.4)		509 (68.4)	235 (31.6)	
High	500 (74.1)	175 (25.9)		536 (78.9)	143 (21.1)	
Temporal flexibility			$p = 0.345$			$p = 0.237$
Fixed	283 (66.3)	144 (33.7)		306 (71.3)	123 (28.7)	
Flexible	680 (68.8)	308 (31.2)		739 (74.3)	255 (25.7)	
Spatial flexibility			$p \leq 0.001$			$p \leq 0.001$
No telework	592 (64.2)	330 (35.8)		645 (69.4)	285 (30.6)	
Telework	371 (75.3)	122 (24.7)		400 (81.1)	93 (18.9)	
Employment type			$p = 0.537$			$p = 0.356$
Full-time	880 (67.9)	416 (32.1)		962 (73.8)	342 (26.2)	
Part-time	82 (70.7)	34 (29.3)		81 (69.8)	35 (30.2)	
Number of subordinates			$p = 0.196$			$p = 0.006$
No subordinates	688 (67.6)	329 (32.4)		728 (71.2)	295 (28.8)	
1–9	167 (72.6)	63 (27.4)		185 (80.1)	46 (19.9)	
10 or more	107 (64.5)	59 (35.5)		131 (78.4)	36 (21.6)	
Age of children			$p = 0.014$			$p = 0.018$
0–7 years only	287 (69)	129 (31)		315 (75.4)	103 (24.6)	
8–17 years only	455 (64.9)	246 (35.1)		496 (70.3)	210 (29.7)	
Mixed	221 (74.2)	77 (25.8)		234 (78.3)	65 (21.7)	

3.2. The Association between Perceived Psychosocial Risk and Support Factors in the Work and Family Settings and FIW/WIF

The main results of the regression analyses remained stable across models. Therefore, only the final model (i.e., step 3) for both dependent variables (FIW and WIF) is presented in Table 3 as well as in the running text. Regarding FIW, three of the socio-demographic and workplace characteristics were statistically significant. That is, the odds for reporting no FIW were lower for respondents aged 35–44 than for respondents aged 20–34. Further, men and non-teleworkers were more likely to report no FIW than women and teleworkers.

Moreover, we found that two of the examined psychosocial risk and support factors in the work setting, task overload and superior support, were associated with FIW. Specifically, regarding task overload, respondents perceiving more task overload were significantly less likely to report no FIW compared to those perceiving less task overload. Regarding perceived superior support, respondents responding ‘Often’ were significantly less likely to report no FIW than those responding ‘Never’. However, those responding ‘Sometimes’ or ‘Always’ did not statistically differ from those responding ‘Never’.

Table 3. Odds ratio with 95% confidence intervals of reporting no family interference with work (FIW)/no work interference with family (WIF).

		All N = 1431	
		FIW	WIF
Age	20–34	1.00	1.00
	35–44	0.68 (0.46–0.99)	0.84 (0.56–1.26)
	45–54	1.09 (0.68–1.73)	0.99 (0.60–1.63)
	55–67	1.23 (0.58–2.60)	0.71 (0.32–1.59)
Gender	Woman	1.00	1.00
	Man	1.53 (1.12–2.09)	1.31 (0.94–1.83)
Educational level	Low	1.00	1.00
	High	0.81 (0.61–1.08)	0.95 (0.69–1.29)
Temporal flexibility	Fixed	1.00	1.00
	Flexible	0.92 (0.68–1.25)	0.95 (0.68–1.31)
Spatial flexibility	No telework	1.00	1.00
	Telework	0.71 (0.52–0.98)	0.74 (0.52–1.04)
Employment type	Full-time	1.00	1.00
	Part-time	0.97 (0.56–1.65)	1.14 (0.66–1.96)
Number of subordinates	No subordinates	1.00	1.00
	1–9	0.87 (0.59–1.29)	0.84 (0.55–1.28)
	10 or more	1.27 (0.84–1.93)	0.88 (0.55–1.43)
Age of children	0–7 years only	1.00	1.00
	8–17 years only	1.02 (0.69–1.51)	1.30 (0.86–1.96)
	Mixed	0.83 (0.56–1.23)	0.81 (0.53–1.24)
Overtime	Agree	1.00	1.00
	Disagree	1.19 (0.88–1.60)	1.87 (1.35–2.58)
Task overload	Agree	1.00	1.00
	Disagree	1.46 (1.08–1.98)	2.01 (1.47–2.76)
Work pace	Agree	1.00	1.00
	Disagree	1.14 (0.84–1.56)	1.41 (1.01–1.98)
Superior support	Never	1.00	1.00
	Sometimes	0.96 (0.53–1.74)	0.80 (0.42–1.50)
	Often	0.53 (0.30–0.91)	0.60 (0.34–1.08)
	Always	0.73 (0.42–1.25)	0.77 (0.43–1.38)
Co-worker support	Never	1.00	1.00
	Sometimes	1.05 (0.41–2.66)	1.33 (0.48–3.73)
	Often	1.06 (0.43–2.64)	1.34 (0.49–3.67)
	Always	1.01 (0.40–2.57)	1.36 (0.49–3.82)
Only part-time work	Yes	1.00	1.00
	No	1.09 (0.77–1.55)	0.72 (0.50–1.03)
Task reduction	Yes	1.00	1.00
	No	1.20 (0.87–1.64)	1.50 (1.07–2.10)
Refused more work demands	Yes	1.00	1.00
	No	1.02 (0.73–1.44)	1.44 (0.99–2.11)
Family support	Frequent conflicts	1.00	1.00
	Occasional conflicts	6.32 (2.58–15.45)	2.44 (1.13–5.25)
	No conflicts anymore	3.66 (0.81–16.68)	0.29 (0.03–2.67)
	No conflicts	2.39 (0.98–5.82)	1.09 (0.51–2.33)
Support from close ones	Disagree	1.00	1.00
	Agree	1.17 (0.88–1.54)	0.98 (0.73–1.31)
Hosmer and Lemeshow goodness-of-fit test		$\chi^2 = 7.125, df = 8, p = 0.523$	$\chi^2 = 9.700, df = 8, p = 0.287$

Statistically significant odds ratios (95% confidence intervals) in bold print.

Additionally, the odds for no FIW were higher for respondents who perceived occasional family conflict compared to those who perceived frequent family conflicts. However, respondents who no longer have or ever had perceived family conflicts did not differ statistically from the group that perceived frequent family conflicts. This was the only

variable showing statistically significant associations with FIW among the psychosocial family factors.

Regarding WIF, the results demonstrate that none of the socio-demographic and workplace characteristics significantly predicted WIF.

Further, the statistical analysis showed that all perceived risk factors, but no support factors, in the work setting had statistically significant associations with WIF. That is, respondents who perceived low work risks were also more likely to report no WIF than those who perceived high risks.

The results show that both a risk and a support factor were statistically significant in the family setting. Specifically, the respondent groups which perceived that they had never had to reduce work tasks due to family reasons and occasional family conflicts had a higher probability for reporting no WIF than their respective reference groups.

4. Discussion

In this study, approximately a third and a quarter of the respondents reported no FIW and no WIF, respectively, demonstrating that even though a fair share of the respondents successfully had reconciled demands from work and family, reconciliation was still a considerable challenge to the majority of respondents.

By comparing the group reporting no FIW/WIF with the group reporting FIW/WIF, statistically significant differences were found with regards to all examined risk factors at work. Specifically, perceiving no or low task overload was associated with no interference in both directions. Overtime- and work pace-variables were similarly associated with WIF but not with FIW. Consistent with previous meta-analytical findings, our findings support the notion that a stressful and time-demanding work hinders work–family reconciliation, and that risk factors in the work setting are more frequently related to WIF than to FIW e.g., [3].

Moreover, while previous research has repeatedly emphasized that various kinds of social support at work reduce WIF and FIW alike [3,4], our study findings demonstrate less relevance of social support at work and the results are in part contradicting. Namely, superior support was the only work support variable showing statistically significant associations with FIW—those who often perceived superior support were less likely to report no FIW than those who never perceived superior support. However, this result should be interpreted with caution since we found no such systematic differences between the rest of the respondent groups with regards to FIW, and no systematic differences were found between any of the respondent groups with regards to WIF. Perhaps, the benefit of social support from managers or co-workers is restricted to specific situations when it is needed or perceived as useful by working families. Instead, it may be that broad, organizational support (e.g., family-friendly organizational policies, attitudes, and behaviors), more effectively supports work–family reconciliation [4].

Regarding the role of family factors for WIF/FIW, reducing job tasks due to family responsibilities was a risk factor with regards to WIF in our study sample. While it might seem more logical that statistically significant associations would have been found between this variable and FIW, cross-domain influences have been found in previous meta-analytical research as well [1,10]. Further, we speculate that a coping strategy of those who had not reduced job tasks has been to consciously choose less demanding job roles during child-rearing years. Therefore, we call for studies investigating how individuals navigate work and family during different life-stages.

Moreover, we found that the variable measuring family support was significantly associated with both directions of interference. Previous research findings have suggested that family conflicts increase both FIW and WIF [3]. While our results indeed highlight that frequent conflicts might drain working families, they also suggest that occasional conflicts might be the right middle ground, being vital to an open communication climate and reducing interpersonal stress within working families [28].

Even though this study did not particularly focus on socio-demographic and workplace characteristics, it was interesting to note that age, gender, and spatial flexibility were statistically significant covariates of FIW (none of WIF) in the current sample.

We included young children's age as a covariate since previous studies have shown that especially young children might amplify the work–family conflict through increased family demands [32–34]. However, this variable proved non-significant in the current study. This finding may suggest that the governmental support offered to working families in a Finnish context is more useful to families with young children, thereby diminishing differences between them and families with older children.

Finally, no FIW was more common among men than women in this sample of working families. A recent meta-analysis focusing on gender differences in work–family conflict reported similar results—while the gender effects tended to be small, among the more significant gender effects was mothers reporting greater FIW than fathers [16]. Further, our finding stresses that even though gender equality in many areas (e.g., education, employment, and health) is supported by the Finnish government, women still experience gender inequality in relation to work–family reconciliation. In line with our results, two recent, large-scale, comparative studies have shown that the level of gender equality in the society is an important factor to consider in work–family conflict research. High levels of gender equality in society combined with individual-level egalitarian values are, for example, associated with higher levels of burnout among mothers [30], and while living in a society characterized by gender equality reduces work–family conflict, it also strengthens the negative relationship between work–family conflict and well-being [31]. Thus, the governmental support of gender equality in other areas may have a rather paradoxical effect when inequalities are still existing in parenting. This points to the urgency of promoting gender equality in the family setting for countries, such as Finland, which generally are viewed as forerunners in terms of gender equality and related policy and practice development. Thus, we call for research emphasizing the female perspective on work–family conflict in various national contexts, at the same time as we highlight the emerging issues in the Nordic welfare state setting.

4.1. Strengths and Limitations

This study was based on data from the Finnish QWLS, a national survey study with a relatively high response rate (66.8%). The sample characteristics were well representative of the total study population. Further, interviews were primarily conducted face-to-face in this large-scale, high-quality survey, which could be regarded a strength [36]. However, the cross-sectional design means that no causal interferences could be determined and there was a risk of common method bias.

The use of binary logistic regression is associated with both strengths and limitations. Specifically, binary regression allows for studying groupwise differences while controlling for potential covariates, but dependent variables must be dichotomous, meaning that nuances of the data might remain undiscovered. However, we wanted to dichotomize these variables to separate the respondent group reporting no FIW/WIF from the groups reporting FIW/WIF, to identify systematic differences in what psychosocial risk and support factors they perceived.

Regarding the measurement of work–family conflict, we did not use a comprehensive scale. While this limits the present study, two important aspects of work–family conflict were indeed captured by conducting separate analyses for FIW and WIF [7], allowing us to distinguish both their mutual and distinct risk and support factors [8,9]. Also, single-item questions might be easy to grasp in an otherwise comprehensive survey from the viewpoint of respondents.

Finally, the main results turned out to be stable across models, but the stepwise process was necessary to conduct to reveal this pattern. Hence, the inclusion of socio-demographic and workplace characteristics as covariates of FIW/WIF may be regarded as strengthening

the validity of the main findings related to the selected psychosocial work and family factors and their associations with FIW/WIF.

4.2. Implications for Research and Practice

Further studies should investigate how this relatively large population group can reconcile work and family, so that measures in work settings can be taken based on a solid evidence base. Here, studies adopting a lifespan approach and critical gender equality perspective are particularly warranted. Further, even though the governmental support in Finland is generally considered generous, several psychosocial risk factors in the work and family settings of working families were identified in this study. To remain effective, this implies that family-friendly public policy work must be iterative, critically and systematically evaluating perceived risk and support factors of working families.

5. Conclusions

Work–family conflict is a public health concern increasingly demanding attention also in the Nordic welfare context. Taking into consideration what psychosocial factors support and hinder successful work–family reconciliation for a vast population group with varying social circumstances and related prerequisites is necessary to properly address specific needs and expectations among the working age population.

Importantly, the current study highlights that work–family conflict is bidirectional. Examining psychosocial risk and support factors in the work and family settings of Finnish working families, risk factors in the work setting emerged as especially important covariates since all of them showed statistically significant associations with WIF or both WIF and FIW. In addition, occasional conflicts within the family proved beneficial in the context of both WIF and FIW. To conclude, both distinct and mutual psychosocial risk and support factors of FIW and WIF were identified, at the same time as two socio-demographic factors as well as one workplace factor were identified as covariates of FIW. This study contributes to the literature on work–family conflict by showing that reconciling work and family is a considerable challenge to Finnish working families despite the governmental support offered in this welfare state—especially to women.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/ijerph19148566/s1>, Table S1. The recoding process. Table S2. Overview of the study sample according to variables measuring psychosocial work and family factors. $N = 1431$. Table S3. The distribution and between-group comparison of psychosocial work and family factors among participants according to reported family interference with work (FIW)/work interference with family (WIF) status. $N = 1431$.

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Informed Consent Statement: Statistics Finland adheres to principles of research ethics and in the event of collecting data direct from citizens with interview surveys, informed consent is always obtained from all involved individuals.

Data Availability Statement: The release of Finnish Quality of Work Life Survey 2018 data is subject to a user license. Information on licenses is provided by Statistics Finland: https://www.tilastokeskus.fi/tup/mikroaineistot/hakumenettely_en.html (accessed on 13 June 2022).

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Title: Work-life balance and the psychosocial work environment in Finnish working life: the case of gender and family life stages

Abstract

Background: Work-life balance is associated with many positive effects at multiple levels and demands increased research attention. In the international literature on work-life balance, the term “gendered life-course” has been used to describe the differences between men and women in work biographies. However, whether this term applies to the Nordic work context remains underexplored.

Objective: This study examined the association between work-life balance, psychosocial work environment (work demands and social support at work), and family life stage among Finnish workers, devoting special attention to family life stages encompassing the care of young, dependent children.

Methods: Data from the Quality of Work Life Survey 2018 were utilized to conduct binary logistic regression analyses ($N = 3790$). Separate analyses were conducted for men and women.

Results: A significant association between family life stage and high work-life balance was found for women but not for men in the Finnish working life. Women in family life stages involving the care of young, dependent children reported the lowest odds of high work-life balance. For both men and women, a positive association between social support at work and high work-life balance was found, while a negative association was found between work demands and high work-life balance.

Conclusions: These findings highlight the importance of psychosocial factors in both the work and family settings for work-life balance. Further, the findings call for an expanded focus on gender equality, also including issues in unpaid work in addition to issues in paid work.

Keywords: Work-Family Balance, Psychosocial Factors, Life Span, Gender Equality, Nordic Countries

1 Introduction

Work-life balance, i.e. the overall satisfaction with the balance between work and personal life [1], is associated with many positive effects. Work-life balance is, for example, associated with increased work engagement [2] and job performance at the individual level [3], increased performance at the organizational level [4], and increased fertility rates and increasing labor at the societal level [5].

However, work-life balance can be very challenging to attain and sustain in contemporary working life. This is for example due to worldwide trends including increasing work demands in terms of work efficiency, task complexity and related skills requirement, and a changing workforce in terms of an increased share of women, dual-earner couples, single parents, and older workers [6, 7]. Thus, the promotion of work-life balance demands increased research attention as the identification of support and protective factors supports the design and development of effective work-life initiatives both at the organizational and societal level [8].

In the international research debate on work-life balance, family life stages including the care of young, dependent children have been particularly highlighted, commonly referred to as “the ‘rush hour’ of life” [9]. This is because the most intensive career-building and child-rearing years tend to coincide, resulting in a potential double-burden to workers in these family life stages [10]. For example, working parents with young children have reported that they need to increase their investments in work to provide for their family and advance in their careers [10, 11]. They must find their place in a work organization and explore whether they can fulfill their work obligations, evaluating how their own competencies meet specific role requirements and expectations [12, 13]. At the same time, they report increased pressure at home related to childcare and household responsibilities [10] – especially working mothers [14, 15, 16] – subsequently resulting in lower levels of work-life balance compared with individuals in other family life stages [17, 18]. In a large-scale study spanning several countries, it was found that

conflicting demands from work and family reduced work-life balance primarily across early family life stages, especially to workers with children in preschool and school-age children [19]. This indicates that the use of lifespan approaches, including a family life stage perspective, see e.g. [20], can be helpful in the study of work-life balance and its support and protective factors.

Work demands refer to aspects of one's job that diminish employees' mental and physical energy [21, 22], subsequently limiting the individual's time and energy to handle non-work responsibilities [23]. For example, a range of cognitive demands, such as exhaustive work tasks and work overload [23, 24], and time-based demands, such as time pressure [25], have been found to reduce work-life balance.

In addition to work demands, social support at work is recognized as a factor influencing work-life balance. Various sources of social support at work, referred to as "psychological or material resources provided through social relationships that can mitigate strains" (p. 288) [6], are consistently linked to a high work-life balance. For example, co-worker support [26], supervisor support [24], and a constructive social climate [27] have all been demonstrated to promote work-life balance. However, while work demands have been included in previous research using a family life stage approach in the examination of work-life balance, social support at work has to our knowledge not been included as a focal point of study. This warrants research including all three variables, to provide organizations and societies with guidance on how to effectively support and protect work-life balance of workers in different family life stages.

In international research on work-life balance, the term "gendered life-course" has been used to describe the differences between men and women in work biographies [28]. That is, in most parts of the world, for men the norm is still continuous full-time work, while the norm for women is part-time work or temporary unemployment during child-rearing years and few

women ever go back to full-time employment [10]. In Finland, in turn, there is an emphasis on full-time employment, meaning that both mothers' and fathers' full-time work is encouraged by heavily subsidized childcare [29]. Flexible work arrangements exist but are limited to part-time working parents with children younger than 3 years (flexible care allowance) and with children starting primary school (partial care allowance). While this model promotes gender equality in the work setting and generally have resulted in high levels of work-life balance among Finnish workers in the past [30, 31, 32, 33], gender differences may exist in the family setting. At the same time, gender equality in the family setting remains a largely untapped issue in Finnish – and in larger terms Nordic – research on work-life balance [34]. However, the results of a recent Finnish study provide initial support to this argument by showing that while there are no gender differences in work interference with family among Finnish women and men, women generally report significantly higher levels of family interference with work than men [2]. To the best of our knowledge, no Finnish study has adopted a family life stage approach in the examination of work-life balance and its support and protective factors.

In sum, international research has demonstrated that high work-life balance varies across family life stages, especially highlighting the time-pressed situation of workers with young, dependent children [10]. Even though this can be particularly true in Finland, where both fathers and mothers are encouraged to engage in full-time employment, the current study is the first to adopt a family life stage approach in the examination of work-life balance and its support and protective factors among Finnish workers. Further, while work demands and social support at work both are recognized as important factors exerting an influence on work-life balance in international research, only work demands have been included in prior studies using a family life stage approach. Therefore, the aim of this study was to examine the association between work-life balance, psychosocial work environment (work demands and social support at work), and family life stage among Finnish workers, devoting special attention to family life stages

encompassing the care of young, dependent children. Separate analyses were conducted for men and women, as previous research has indicated that work-life balance is experienced differently by women and men in different family life stages [19].

2 Methods

2.1 Study Design and Data Material

This study utilized data from the Finnish Quality of Work Life Survey 2018 (QWLS) collected by Statistics Finland. QWLS is a recurring national interview survey targeting participants aged 15–67 who are identified as employed wage and salary earners regularly working at least 10 h per week. In QWLS 2018, the interviews were primarily conducted face-to-face (9% were conducted over the phone), and the duration median of the face-to-face interviews was 63 min. The original sample comprised 4110 participants, giving a response rate of 66.8 % [35]. Only respondents that could be classified into any of the five family life stages (see the study inclusion criteria below) were included in the current study. This subsample consisted of 3790 participants.

2.2 Ethical Considerations

This study used data collected by Statistics Finland, a governmental national statistics service provider. The compilation of statistics adheres to the provisions of the Finnish Statistics Act (280/2004). Alongside the Statistics Act, the EU's General Data Protection Regulation EU 2016/679 and the national Data Protection Act are applied to the processing of personal data. Confidentiality of data collected for statistical purposes is decreed in the Act on the Openness of Government Activities (621/1999).

2.3 Measures

The dependent variable, work-life balance, was measured using a single-item statement: “How satisfied are you with how well you can combine work and the rest of your life in your present

job?” This item was originally scored on a 4-point Likert scale. While “Difficult to say” was a possible response option, this was excluded from the regression analyses. For the purposes of the current study, this dependent variable was dichotomized into high work-life balance (very satisfied) and other (quite satisfied, quite dissatisfied, and very dissatisfied).

Two factors measuring psychosocial work environment were included in the analysis: work demands and social support at work. The respondents were asked to indicate how well the following six statements describe their perceived work demands: “I often find it difficult to cope at my work?”, “Matters related to work keep running disturbingly in your mind in free time?”, “My work contains tight time schedules?”, “I often have to stretch my working day to get all the work done?”, “I usually have too many different tasks under way?”, “I do not have time to do my work as well and conscientiously as I would like to?”. These items were scored on a 4-point Likert scale, where 4 denoted full agreement. Similarly, the respondents were asked to indicate how well the following five statements describe their perceived social support at work: “When your work seems difficult, do you receive support and encouragement from your superiors?”, “When work seems difficult, do you receive support and encouragement from your co-workers?”, “Do you feel that you are a valued member of the work community?”, “Open atmosphere and team spirit prevail at my workplace?”, “There is an inspiring atmosphere at my workplace?” The first three items were scored on a 4-point Likert scale (where 4 denoted full agreement), while the two last items were scored on a 5-point Likert scale (where 5 denoted full agreement).

Based on these items, two separate instruments were developed to measure work demands and social support at work. The items were averaged to obtain an overall score for the instruments measuring work demands and social support at work, and the internal consistency was good (Cronbach's $\alpha = .78$ for both scales).

Hill et al.'s [20] family life stage categorization mentioned in the article introduction was utilized. This categorization includes five family life stages: family life stage 1=aged under 35 years with no children living at home, family life stage 2=children aged 0–5 years and no older children living at home, family life stage 3=children aged 0–5 years as well as 6–17 years living at home, family life stage 4=children aged 6–17 years only (no younger children) living at home, family life stage 5=aged 45 years or more and no children under 18 years living at home.

Gender (man, woman) was included as a dichotomous variable. Dichotomous control variables were cohabiting partner (yes, no) and employment status (full-time, part-time).

2.4 Statistical Analyses

SPSS version 27 was used to conduct the statistical analyses. A missing data analysis was conducted, revealing that the missing values ranged from 0 to 7 (0.002%) for the included variables. The responses 'not applicable' and 'cannot say' ranged from 0 to 64 (0–0.02%) and from 0 to 10 (0–0.003%) respectively. A descriptive analysis was conducted to report sample characteristics (i.e., frequencies and percentages).

Next, separate binary logistic regression analyses were run for men and women with reported work-life balance as the dependent variable. The regression analyses were conducted using the Enter method, where all included variables were specified by the researchers and entered in a stepwise process. In the first step, the two background factors and family life stage with family life stage 5 as the reference group were included. Social support at work was added in the second step and work demands were added in the third step. The results are presented in terms of calculated odds ratios with 95% confidence intervals. The Hosmer and Lemeshow goodness-of-fit test was run for all regression models.

3 Results

Study sample characteristics are presented in Table 1. Approximately one third of the respondents reported that they experienced high work–life balance; however, this was slightly more common among men than among women.

Results of separate regression analyses for men and women are presented in Table 2. For men, work life balance was not significantly associated with neither the background variables nor life stage. However, social support at work (in Model 2 and 3) and work demands (in Model 3) were significantly associated with work-life balance for men. While a statistically significant, positive association was found between perceived social support at work and high work-life balance for men, perceived work demands lowered the odds of high work-life balance.

For women, statistically significant associations were found between several variables and work-life balance. In Model 1, women engaging in part-time work were more likely to report that they experienced high work-life balance than women engaging in full-time work. This result holds true also in Model 2, controlling for social support at work. However, employment status was no longer statistically significant in Model 3, controlling not only for social support at work, but also for work demands. The family life stage variable was statistically significant in all three models for women. Comparing the odds for reporting high work-life balance among women in family life stages 1–4 with women in family life stage 5, the odds were lowest for women in family life stage 2 in all models, followed by women in life stages 3 and 1. In Model 1 and 3, the odds for experiencing high work-life balance were not significantly lower for women in family life stage 4 than for those in family life stage 5. However, in Model 2, the odds were significantly lower for women in family life stage 4 as well. Similar to what was found for men, the odds for reporting high work-life balance were higher for women reporting higher social support at work, and the odds were lower for women reporting higher work demands.

4 Discussion

In the current study, approximately a third of both the male and female respondents reported that they were very satisfied with their work-life balance, demonstrating that a substantial share of the participants experienced high work-life balance. This is in line with previous research, demonstrating that comparatively high levels of work-life balance generally have been reported by workers in Finland – and in broader terms the Nordic countries – in the past [30, 31, 32, 33].

The main contribution of this study was the novel combination of variables (family life stage, work demands, and work support), analyzed in relation to work-life balance separately among Finnish men and women. The analyses were conducted by gender, highlighting that family life stage generally plays a more important role for the work-life balance of women compared to men. Thus, the results of the present study show that the term “gendered life-course” [28], which has been used in previous international literature to describe gender differences in work biographies, applies to the Finnish working life as well but rather to describe the different experiences by Finnish men and women when it comes to their work-life balance.

More specifically, family life stage did not emerge as a significant variable in any of the models for men. In previous international research, family life stages including the care of young, dependent children (family life stages 2 and 3 in our study) have been demonstrated to be associated with lower levels of work-life balance, also for men e.g. [18]. In the current study, however, this variable remained non-significant for men, even after controlling for social support at work and work demands.

For women, in turn, significant associations were found between family life stage and work-life balance. By comparing women in family life stages 1–4 with women in family life stage 5 (women aged ≥ 45 with no children under 18 years living at home), women in family life stages 1 (<35 years & no children), 2 (children 1–5 years only), and 3 (children 1–5 years & 6–17 years) were less likely to report high work-life balance. This is in line with previous

international research which has demonstrated that conflicting demands from work and family reduce work-life balance primarily across early family life stages [19]. Furthermore, women in family life stages 2 and 3 in particular were less likely to report high work-life balance, which supports the results of prior studies demonstrating that workers in family life stages involving the care of young, dependent children report increased pressure at home (e.g. childcare and household responsibilities) [10], especially working mothers [14, 15, 16]. Subsequently, it has been found that workers in these family life stages report lower levels of work-life balance compared with workers in other family life stages [17, 18]. The emphasis on full-time work for both men and women in Finland should, at least in theory, provide many men with the opportunity to spend more time with their family and engage in unpaid work, it is both surprising and discouraging to find that the dual-earner model instead has contributed to an intensive double-burden for women. While previous research on work-life balance targeting the Finnish – and in broader terms the Nordic – welfare state setting has highlighted gender equality in the work setting as a focal issue [34], this study is among the first to shift focus to gender equality in the family setting.

Social support at work and work demands were significantly associated with work-life balance in all models. While a positive association was found between social support at work and work-life balance, a negative association was found between work demands and work-life balance for both men and women. These findings support previous studies [23, 24, 25, 26, 27], highlighting the key role of the psychosocial work setting for the promotion of work-life balance. Further, social support at work was shown to play a role in the association between family life stage and work-life balance for women, as women in family life stage 4 (children 6–17 years only) were less likely to report work-life balance than women in family life stage 5 in the second model. However, this finding did not remain significant in the third model, controlling for work demands.

4.1 Strengths and Limitations

The current study utilized data from a Finnish, national survey study (QWLS). A relatively high response rate (66.8%) was attained, and the sample represented the total study population well. A particular strength of this study – especially when considering the fairly large sample size – was that interviews primarily were conducted face-to-face [35]. However, as with all cross-sectional research, there was a risk of common method bias, and no causal inferences could be claimed.

Analyses were performed using binary logistic regression. An advantage with this statistical method is that it allows for the study of groupwise differences, while simultaneously controlling for effects of potential covariates. However, the dependent variable must be dichotomous, meaning that all nuances of the data may not become visible. The dichotomization of the dependent variable was justified in the current study to separate the group of workers reporting that they were very satisfied with their work-life balance from the group reporting that they were less than very satisfied, and to subsequently identify systematic differences in family life stage, work demands, and social support at work.

A single-item statement was used to measure work–life balance. This could be regarded as a study limitation as multi-item instruments generally are preferred in research. However, due to practical constraints (such as survey comprehensiveness and respondent burden), certain single-item statements, including statements about work-life balance, are regarded acceptable and even useful [36].

The use of a family life stage perspective could be considered a strength, as it shifts the focus from the individual to the psychosocial environment of the individual [28]. The use of Hill et al.'s [20] family life stage classification is limited in the sense that it does not include workers who are not (yet) parents and above 35 years. However, the use of this classification

could also be considered a strength, as it has been adopted in other studies as well e.g. [10] and thus allowed a comparison between research results.

Finally, to increase the validity of the main findings related to the associations between family life stage, social support at work, work demands, and work-life balance, we controlled for two background factors (i.e. employment status and cohabiting partner).

5 Conclusion

Work-life balance is not just an individual priority in contemporary working life, it is also valued by organizations and societies due to its multi-levelled positive effects. Widespread trends, not least an increasingly diverse workforce, challenge organizational work-family initiatives and societal family-friendly policies which are currently in place. To the best of our knowledge, the present study is the first Finnish study to use a family life stage approach in an empirical examination of work-life balance, as well as the first study on work-life balance internationally to include both family life stage, social support, and work demands. Importantly, this study demonstrates a gendered life-course with respect to experienced work-life balance in Finland, as a statistically significant association between family life stage and work-life balance was found for Finnish women but not for Finnish men.

Further, compared with women in the age of 45 or over with no under-aged children in the home (family life stage 5), women in the earlier family life stages were less likely to report high work-life balance and this particularly applies to women with young, dependent children living at home (family life stages 2 and 3). With regards to both men and women, a positive association between social support at work and high work-life balance was found, while a negative association was found between work demands and high work-life balance. These findings highlight the importance of psychosocial factors in both the work and family settings

for work-life balance. Further, the findings call for an expanded focus on gender equality, also including issues in unpaid work in addition to issues in paid work.

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Table 1. Overview of the study sample according to variables measuring work–life balance, background factors, psychosocial work environment (work demands and social support at work) and family life stages by gender and in total [$N = 3790$; N (%) or mean (SD)].

Variable	Men	Women	Total
	$N=1807$	$N=1983$	$N=3790$
	(47.7)	(52.3)	(100)
<i>Work-life balance</i>			
High	521 (31.0)	526 (28.8)	1047 (29.8)
Other	1162 (69.0)	1303 (71.2)	2465 (70.2)
<i>Background factors</i>			
<i>Employment status</i>			
Part-time	113 (6.3)	291 (14.7)	404 (10.7)
Full-time	1691 (93.7)	1688 (85.3)	3 379 (89.3)
<i>Cohabiting partner</i>			
Yes	1327 (73.4)	1465 (74.0)	2 792 (73.7)
No	480 (26.6)	514 (26.0)	994 (26.3)
<i>Family Life stages</i>			
Life stage 1	378 (20.9)	343 (17.3)	721 (19.0)
Life stage 2	163 (9.0)	135 (6.8)	298 (7.9)
Life stage 3	129 (7.1)	123 (6.2)	252 (6.6)
Life stage 4	496 (27.4)	531 (26.8)	1 027 (27.1)
Life stage 5	641 (35.5)	851 (42.9)	1 492 (39.4)
<i>Psychosocial work environment</i>			
Work demands (overall score)	2.21 (0.61)	2.41 (0.62)	2.32 (0.63)
Social support at work (overall score)	3.41 (0.64)	3.40 (0.66)	3.40 (0.65)

Table 2. Logistic regression analyses conducted by gender and presented in terms of odds ratio with 95% confidence intervals: association between work-life balance, psychosocial work environment (work demands and social support at work), and family life stages, controlling for background factors (Men N=1807; Women N=1983).

	Work-life balance					
	Men			Women		
	Model 1: Control factors + Family life stages	Model 2: M1 + Social support at work	Model 3: M2 + work demands	Model 1: Control factors + Family life stages	Model 2: M1 + Social support at work	Model 3: M2 + work demands
Cohabiting partner	1.00	1.00	1.00	1.00	1.00	1.00
Yes	0.93 (0.72–1.20)	0.91 (0.70–1.18)	0.93 (0.71–1.22)	0.98 (0.77–1.24)	0.93 (0.73–1.18)	1.03 (0.80–1.33)
Employment status	1.00	1.00	1.00	1.00	1.00	1.00
Full-time	1.10 (0.73–1.67)	1.15 (0.75–1.77)	0.94 (0.60–1.47)	1.58 (1.20–2.09)*	1.56 (1.18–2.07)*	1.33 (0.99–1.79)
Part-time	1.00	1.00	1.00	1.00	1.00	1.00
Family life stage						
5 (≥45 yrs & no children at home)	1.26 (0.94–1.68)	1.02 (0.76–1.38)	1.14 (0.83–1.55)	0.79 (0.59–1.05)	0.69 (0.51–0.94)*	0.84 (0.61–1.15)
4 (children 6–17 yrs only)	0.72 (0.47–1.09)	0.67 (0.43–1.02)	0.82 (0.53–1.28)	0.62 (0.40–0.96)*	0.57 (0.36–0.89)*	0.62 (0.38–0.98)*
3 (children 1–5 yrs & 6–17 yrs)	0.90 (0.58–1.39)	0.82 (0.52–1.28)	1.00 (0.63–1.60)	0.49 (0.30–0.80)*	0.47 (0.29–0.77)*	0.54 (0.32–0.91)*
2 (children 1–5 yrs only)	0.84 (0.64–1.10)	0.84 (0.64–1.11)	1.00 (0.75–1.33)	0.66 (0.51–0.85)*	0.62 (0.48–0.80)**	0.63 (0.48–0.83)**
1 (<35 yrs & no children at home)						
<i>Psychosocial work environment</i>						
Social support at work		2.36 (1.95–2.85)*	1.93 (1.59–2.35)**		1.99 (1.67–2.38)**	1.53 (1.28–1.84)**
(overall score)						
Work demands			0.36 (0.29–0.44)**			0.30 (0.25–0.37)**
(overall score)						
Hosmer and Lemeshow	$\chi^2 = 0.83$, df = 6, $p = 0.991$	$\chi^2 = 15.82$, df = 8, $p = 0.045$	$\chi^2 = 12.42$, df = 8, $p = 0.133$	$\chi^2 = 2.91$, df = 5, $p = 0.713$	$\chi^2 = 10.89$, df = 8, $p = 0.208$	$\chi^2 = 5.138$, df = 8, $p = 0.743$
goodness-of-fit test						

Notes: Statistically significant odds ratios (95% confidence intervals) at the ** $p < 0.01$ level, and the * $p < 0.05$ level. yrs=years.

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Work–life balance and work engagement across the European workforce: a comparative analysis of welfare states

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Background: Few large-scale, comparative studies have examined both the positive mental well-being outcomes of work–life balance and the broader socio-economic context by which it is shaped. Therefore, the aim of this study was to investigate the association between work–life balance and work engagement across a wide range of European welfare states, as well as to examine whether work–life balance varies across European countries and whether this variance can be explained by welfare regime, controlling for individual-level factors. **Methods:** This study utilized data from the 2015 European Working Conditions Survey. In total, 35 401 workers from 30 European countries could be classified into the adopted welfare regime typology. Work engagement was measured using an ultra-short version of the Utrecht Work Engagement Scale, and work–life balance with a question on the fit between working hours and family or social commitments. Due to the hierarchical structure of the data, multilevel regression models were applied. **Results:** A statistically significant positive association between work–life balance and work engagement across the European workforce was found. Between-country variance in work–life balance was demonstrated and this can in part be explained by welfare regime. **Conclusions:** While it has long been recognized that occupational stress and work-related mental health problems are shaped by the socio-economic context and thus regarded as public health concerns in Europe, our results suggest that this applies to well-being at work and related support factors as well.

Introduction

Health, including mental health, is created in peoples' everyday settings,¹ and is promoted by empowering them to participate in decisions relevant to their lives and well-being so that they can influence both individual and environmental health determinants.^{1,2} According to the Social Determinants of Health Framework,³ fair employment and decent work are important social determinants of health. Thus, the workplace offers an ideal setting to support mental health promotion of a large share of the population, not only that of workers but also of their families and communities, as well as of wider society.⁴ Occupational stress and work-related mental health problems have long been recognized as public health concerns in Europe,⁵ due to the associated societal consequences in terms of, e.g. absenteeism, labour turnover and disability pension costs.⁶ However, to address well-being and productivity across the European workforce effectively, it has been argued that the traditional focus of occupational safety and health must be expanded to include an understanding and assessment of those factors that lead to healthy, satisfied and productive workers.⁷ Likewise, the WHO Commission on the Social Determinants of Health has advocated a proactive approach to the improvement of working conditions. In this framework, the psychosocial work environment has been highlighted as a key component of working conditions.³ In line with this, workplace health promotion has reoriented from an emphasis on wellness activities directed towards the individual, to collective endeavours involving both workers and management to create health-promoting workplaces. This settings approach is holistic

and integrative, addressing both individual risk factors and broader organizational and environmental issues.⁴

According to the settings approach,⁸ the core activity of the setting must be considered to make health promotion effective. Studying mental well-being at work thus requires considering how the health determinant of interest relates to productivity, the core activity of organizations.^{9,10} Although rarely studied in public health research, prior studies in occupational health psychology and related fields have shown that work engagement, defined as a positive, psychological state consisting of the three subcategories vigour, dedication and absorption,¹¹ is a particularly important mental well-being outcome to consider in a workplace setting. High levels of work engagement are associated not only with productivity, in terms of financial return¹² and improved job performance,¹³ but also with important health-related consequences, such as reduced burnout, anxiety and depression.^{14,15}

Another work-related factor that is associated with work engagement is work–life balance. Work–life balance continues to be a policy priority within the European Union.¹⁶ Work–life balance refers to the 'overall interrole assessment of compatibility between work and family roles' (p. 703).¹⁷ Prior work on work–life balance in European public health research has primarily studied work–life imbalance, e.g. associating it with health problems^{18,19} and reduced work ability.²⁰ However, occupational health psychology and related fields have directed research attention to the association between work–life balance and positive mental well-being outcomes. For example, it has been demonstrated that work–life balance is associated with work engagement, and this association constitutes an area of special

interest in the workplace setting. However, results thus far are inconclusive regarding whether this association is negative or positive, since the studies are based on single countries or single organizations using small samples.²¹ Those demonstrating a negative association have explained it by adopting a role strain perspective, in which work and family demands are regarded incompatible due to limited time and energy,²² suggesting that engagement in one role requires disengagement in another.²³ Conversely, those demonstrating a positive association have explained it by adopting a role enrichment perspective, in which positive experiences and affect in one role are regarded to increase engagement in others.^{24,25}

Various demographic and work-related factors have been associated with work–life balance.²⁶ Moreover, a growing body of evidence demonstrates that work–life balance is shaped by the wider economic, cultural and political context.^{27,28} A few comparative studies on the socio-economic factors of work–life balance exist, demonstrating country variation. However, these tend to be focused on identifying factors that can explain work–life imbalance rather than work–life balance. A likely determinant of the cross-country variation in work–life balance is the comprehensiveness and implementation of family-friendly policies in different welfare regimes.²⁹ A welfare regime constitutes welfare states with similar political traditions and comprehensiveness in welfare provision.²⁷ According to Ferrera³⁰ and Bamba and Eikemo's²⁷ classification, the European context includes five welfare regimes: Nordic, Conservative, Liberals, Southern Europe and Central and Eastern Europe (CEE). A prior study has shown that welfare regimes with the most extensive family-friendly policies report the highest levels of work–life balance.²⁹ Furthermore, a few studies have demonstrated differences in the association between work–life imbalance and health problems, in terms of poor mental well-being and poor self-related health, across European welfare regimes.^{28,31}

Different welfare regimes approach work–life balance-related policies in distinct ways. In the Nordics, where employment is heavily regulated and the dual-earner model dominates, the state facilitates work–life balance through generous and universal measures such as publicly funded child and elderly services and paid parental leave.^{29,32} In contrast, in both the Liberals and the Conservatives, families are responsible for finding own solutions to reconcile work and family demands, which often results in men being the main breadwinners and women engaging in part-time work.³³ In the Liberals, market-based solutions dominate (e.g. childcare provided by private ventures),^{34,35} whereas family-based support dominates in the Conservatives. Moreover, employment is less regulated in the Liberals than in the Conservatives.²⁸ As in the Conservatives, social support provision in the Southern Europe is family-based^{27,35} and men engage in full-time work; however, they diverge from the Conservatives in that women often engage in full-time childcare. As in the Nordics, a dual-earner model dominates in the CEE; however, employment is weakly regulated and there are traditional gender roles in housework.³¹ The bottom line is that welfare states to a varying degree support health and well-being by redistributing resources between members of society to reduce social exclusion, referred to as the 'Robin Hood function', and by redistributing individual resources across the lifespan to insure against social risks, referred to as the 'Piggy Bank function'.³⁶ How these two functions influence work–life balance is an interesting area of investigation, where potential differences between welfare regimes are of particular interest.

However, prior cross-country research on both the positive mental well-being outcomes of work–life balance and the broader socio-economic context by which it is shaped is inconclusive, not least because most existing studies are based on a small number of countries with contradicting results. Even though previous country-level studies have demonstrated an association between work–life balance and work engagement, it remains unexplored whether this association can be found across a wide range of European countries while accounting for the multilevel structure of a large-scale data. This is of

relevance to public health research and practice, especially to the design and implementation of family-friendly policies and the creation of health-promoting workplaces.

Against this background, the aim of this study was to investigate the association between work–life balance and work engagement across a wide range of European welfare states, as well as to examine whether work–life balance varies across European countries and whether this variance can be explained by welfare regime, controlling for individual-level factors.

Methods

Study sample

The current study was based on data from the 2015 European Working Conditions Survey (EWCS), an interview survey that is conducted by Eurofound on a regular basis.³⁷ The 2015 EWCS targeted participants from 35 countries who were identified as workers aged 15 or above. A multi-stage, stratified, random sample approach was employed in each country. There was substantial sample variation across countries depending on the size of the country's workforce. However, a sample size of minimum 1000 was aimed at with regard to all countries. Countries were also given the opportunity to top-up their sample size (taken up by, e.g. Belgium and Spain). The interviews were conducted face-to-face and via telephone. The number of participants in the 2015 EWCS was 43 850, giving an overall response rate of 42.5%. However, the response rate varied considerably by country (ranging from 11% in Sweden to 78% in Albania). An important reason for the low response rate among countries found at the bottom of the response rate ranking is the two-phase approach, in which respondents were recruited via telephone for a face-to-face interview. The inclusion criteria of the current study specified that respondents were currently workers (i.e. individuals who were unemployed, retired, on leave, full-time homemakers, full-time students, disabled and other were excluded) and could be classified into the five welfare regimes, resulting in a subsample of $N = 35\ 401$. Details on the survey can be found elsewhere.³⁸

Measurement

Work engagement was measured using an ultra-short version of the Utrecht Work Engagement Scale (UWES). The mean scale was computed based on the three following items: 'At my work I feel full of energy (vigour)', 'I am enthusiastic about my job (dedication)' and 'Time flies when I am working (absorption)'. Responses were scored on a 5-point Likert scale where higher scores indicated higher work engagement. Cronbach's α was 0.73 for the current subsample. Work–life balance was measured using a single-item: 'How well do your working hours fit in with your family or social commitments?'. Answers were scored on a Likert scale, ranging from 1 (not at all well) to 4 (very well). However, these were dichotomized into very well and less than very well (not at all well, not well and well).

Countries were grouped according to Ferrera³⁰ and Bamba and Eikemo's²⁷ classification of welfare typologies (30 countries and 5 regime types in total): Nordic (Sweden, Denmark, Finland and Norway), Conservative (Austria, Belgium, France, Germany, The Netherlands, Luxembourg and Switzerland), Liberals (UK and Ireland), Southern Europe (Greece, Spain, Italy, Portugal, Cyprus and Malta) and CEE (Estonia, Lithuania, Hungary, Czech Republic, Poland, Latvia, Romania, Slovakia, Slovenia, Bulgaria and Croatia). Gender (man, woman) was included as a dichotomous variable. Age (in years) was included as a continuous variable. Dichotomous control variables were cohabiting partner (yes, no), cohabiting children (yes, no), supervisory position (yes, no), employment status (full-time, part-time), International Standard Classification of Education (low ≤ 4 , high ≥ 5) and whether the respondent was the most significant contributor to the household income (yes, no).

Statistical analyses

SPSS version 27 (SPSS, SPSS IBM Statistics, USA) statistical package was employed to perform the statistical analyses. Initially, a missing data analysis was conducted followed by descriptive statistics to present sample characteristics. Given the multilevel structure of the data, we applied multilevel regression analyses with individuals (level 1) nested within countries (level 2). By applying random intercept multilevel models, between-country variation can be studied. All multilevel models included a fixed part and a random component.^{39,40} First, multilevel linear regression analysis was applied to examine the association between work-life balance and work engagement. As an initial step, the random intercept model was built to estimate the between-country variation of the intercept. The intraclass correlation coefficient (ICC) was calculated to estimate the proportion of the variance accounted for by clustering. Further, the Design Effect (DEFF) was calculated which takes both the mean cluster size (*N*) and within-cluster homogeneity (ICC) into account to quantify the degree to which a multilevel sample differs from a one-level random sample³⁹ (see also Supplementary material S1). In the second step, work engagement was entered together with the control variables. Estimate values with 95% confidence intervals are presented. Next, multilevel logistic regression analysis was applied to examine the variation of work-life balance between countries and the underlying factors for this variation. This latter analysis constituted three models. The random intercept model was run to estimate the between-country variation of the intercept and the ICC⁴⁰ (see also Supplementary material S1). The control factors were added in Model 2 and welfare regimes in Model 3. Model fit statistics are presented [−2 log-likelihood, Akaike information criterion (AIC) and Bayesian information criterion (BIC)].

Results

Study sample characteristics are presented in Table 1. Women slightly more often than men reported a good work-life balance. In general, women also tended to report higher work engagement scores.

Results of multilevel regression analyses are presented by gender and in total. Analysing the association between work-life balance and work engagement (dependent variable) using multilevel linear regression, the results of the random intercept model showed that multilevel analysis was warranted (between-country variance was 0.02 and ICC was 0.04 for both men and women, and DEFF was 21.68 for men and 25.01 for women), random intercept model not presented. In Table 2, a positive association between work-life balance and work engagement is shown. Separate analyses for men and women reveal only marginal differences, showing that the association is slightly stronger among men than among women.

Table 3 shows results from multilevel logistic regression analyses with work-life balance as the dependent variable. The results of the random intercept model warranted multilevel analysis. Significant between-country variation was observed with an ICC of 0.04 for men and 0.05 for women. Further, the between-country variance was higher for women than for men. Individual-level variables were added in Model 2. No substantial reduction in the between-country variance was found for men nor for women when these variables were included. In Model 3, welfare regime was added. The inclusion of this variable yielded substantial reduction of the between-country variance for both men and women. Moreover, Supplementary table S1 shows that working men in both Southern Europe and CEE were significantly less likely to report work-life balance than working men in the Nordics, while no statistically significant difference was found between workers in Conservative and Liberal welfare regimes and workers in the Nordic welfare regime. For women, Southern Europe was the only welfare regime in which workers had significantly lower odds of reporting work-life balance compared with workers in the Nordics.

Table 1 Overview of the study sample according to variables measuring work engagement, work-life balance and control factors by gender and in total [*N* = 35 401; *N* (%) or mean (SD)]

	Men <i>N</i> = 17 498 (49.4)	Women <i>N</i> = 17 897 (50.6)	Total <i>N</i> = 35 401 (100)
Work engagement	3.94 (0.71)	3.96 (0.70)	3.95 (0.70)
Work-life balance			
Very well	4861 (27.9)	5668 (31.8)	10 529 (29.9)
Less than very well	12 558 (72.1)	12 179 (68.2)	24 737 (70.1)
Age	43.90 (12.86)	43.66 (12.37)	43.49 (11.95)
Educational level			
High	5267 (30.2)	6744 (37.8)	12 011 (34.1)
Low	12 153 (69.8)	11 101 (62.2)	23 254 (65.9)
Cohabiting partner			
Yes	11 751 (67.2)	11 408 (63.8)	23 159 (65.5)
No	5736 (32.8)	6483 (36.2)	12 219 (34.5)
Cohabiting children			
Yes	7526 (43.0)	9025 (50.4)	16 551 (46.8)
No	9967 (57.0)	8865 (49.6)	18 832 (53.2)
Most significant contributor to the household income			
Yes	14 071 (85.6)	8396 (51.3)	22 467 (68.5)
No	2364 (14.4)	7957 (48.7)	10 321 (31.5)
Employment status			
Full-time	15 350 (88)	12 748 (71.4)	28 098 (79.6)
Part-time	2101 (12)	5106 (28.6)	7207 (20.4)
Supervisory position			
Yes	3579 (20.7)	2202 (12.4)	5781 (16.5)
No	13 708 (79.3)	15 516 (87.6)	29 224 (83.5)
Welfare regime			
Nordic	1850 (10.6)	1873 (10.5)	3723 (10.5)
Conservative	4767 (27.2)	4827 (27.0)	9594 (27.1)
Liberals	1407 (8.0)	1215 (6.8)	2622 (7.4)
Southern Europe	4406 (25.2)	4031 (22.5)	8437 (23.8)
CEE	5068 (29.0)	5951 (33.3)	11 019 (31.1)

Table 2 Association between work-life balance and work engagement by gender and in total: Results of multilevel linear regression (estimate and 95% confidence intervals) (total *N* = 35 401; Men *N* = 17 498; Women *N* = 17 897)

	Work engagement Estimate (95 % CI)
Total	
Fixed effect: Work-life balance	0.27 (0.26–0.29)
Random effects	
Between-country variance	0.01
ICC	0.03
DEFF	31.90
Men	
Fixed effect: Work-life balance	0.28 (0.25–0.30)
Random effects	
Between-country variance	0.01
ICC	0.03
DEFF	16.58
Women	
Fixed effect: Work-life balance	0.27 (0.25–0.30)
Random effects	
Between-country variance	0.02
ICC	0.03
DEFF	18.50

Notes: Results are adjusted for control factors (i.e. age, educational level, cohabiting partner and children, employment status and supervisory position).

Discussion

Overall, the study's findings provided support for a statistically significant positive association between work-life balance and work

Table 3 Multilevel logistic regression analysis: reduction in the between-country differences in work–life balance (total $N = 35\,401$; men $N = 17\,498$; women $N = 17\,897$)

	Work–life balance Model 1: Random intercept	Model 2: M1 + Control factors	Model 3: M2 + Welfare regime
Total			
Random effects			
Country level			
Between-country variance	0.16	0.16	0.12
ICC	0.05	0.05	0.03
Statistics			
–2 Log-likelihood	156 702.941	143 364.424	143 380.42
AIC	156 704.941	143 366.425	143 382.42
BIC	156 713.412	143 374.8	143 390.795
Men			
Random effects			
Country level			
Between-country variance	0.14	0.13	0.09
ICC	0.04	0.04	0.02
Statistics			
–2 Log-likelihood	78 004.829	72 184.32	72 201.112
AIC	78 006.83	72 186.32	72 203.112
BIC	78 014.595	72 194.001	72 210.793
Women			
Random effects			
Country level			
Between-country variance	0.19	0.18	0.15
ICC	0.05	0.05	0.04
Statistics			
–2 Log-likelihood	78 776.697	71 214.873	71 231.51
AIC	78 778.697	71 216.874	71 233.51
BIC	78 786.486	71 224.555	71 241.191

engagement across a wide variety of European welfare states, adjusting for individual-level control factors. This lends support to the role enrichment perspective and extends the findings of prior small and single-country sample studies.^{24,25}

The present study adds to prior, large-scale studies on mental health and well-being across European welfare states^{28,31} by expanding the traditional focus on risk factors to include support factors.^{5,7} That is, while both Lunau *et al.*²⁸ and Mensah and Adjei³¹ have demonstrated that work–life imbalance can be associated with health problems, such as poor mental well-being, the present study shows that work–life balance, in turn, can be associated with positive aspects of mental well-being at work, such as work engagement.

Further, the current study addressed the pressing need to account for the wider cultural and political context in the study of well-being at work and work–life balance in particular.²⁸ Applying multilevel modelling, between-country variance in work–life balance was demonstrated for both men and women and the variance was higher for women. While the between-country variance was not substantially reduced for men nor for women by including individual-level control variables, the variations between countries were substantially reduced for both men and women when welfare regime was included.

Analysing the association between welfare regime and work–life balance, our expectation was that the Nordic welfare regime would stand out from the others in good terms as it usually is referred to as a good example when it comes to the promotion of work–life balance.²⁹ Indeed, results demonstrated that both men and women in the Southern European welfare regime and men in the CEE welfare regime were less likely to report work–life balance when compared with men and women in the Nordic welfare regime. With regard to Southern Europe, the family-based social support with a clear division of men engaging in full-time work and women in full-time childcare is likely to explain why workers in this welfare regime were less likely to report work–life balance.^{27,35} With regard to

CEE, where a dual-earner model dominates and there are traditional gender roles in housework, it was unexpected that men, not women, were less likely to report work–life balance compared with their Nordic counterparts. It is possible that the weakly regulated labour market in CEE is part of the explanation to why this finding was only found among working men.³¹ However, workers in the other welfare regimes (both men and women) did not significantly differ from those in the Nordic.

The present, large-scale survey study based on 2015 EWCS data was the first comparative study to apply multilevel modelling in the analysis of the association between work–life balance and work engagement. Further, it contributed to the relatively small but growing literature on how work–life balance is shaped by the socio-economic context, demonstrating that between-country variance exists, and that welfare regime can explain part of this variance.

The study has certain strengths and limitations. First, causal relationships could not be determined between the variables as the study used cross-sectional data. For example, it is possible that high levels of work engagement can help individuals to balance their work and personal life, rather than the other way around. Considerable variation in the response rate between the countries could be associated with bias. However, there were no only marginal changes in the results when we ran additional multilevel analyses in which we adjusted for response rate (results not shown). Given the large sample and the hierarchical structure of the data, a strength of this study was the use of multilevel modelling.

Furthermore, work engagement was measured using an ultra-short version of the well-validated UWES-scale, while work–life balance was measured using a one-item statement. However, single-item statements about work–life balance have been validated in a previous study, demonstrating that single-item statements about work–life balance can be regarded acceptable and even useful due to practical constraints.⁴¹

The adopted welfare regime typology highlighted how work–life balance is shaped by the socio-economic context, although not specifically developed to capture work–life balance policies. However, other approaches, such as ones taking institutional and labour market factors as their starting points, would be useful in future studies.

In conclusion, study findings demonstrated that work–life balance and work engagement are associated across European welfare states. Furthermore, the variations between countries in work–life balance were reduced when welfare regime was included in the analysis. Our findings thus suggest that work–life balance in part is shaped by the socio-economic context and this should be considered in the design and implementation of future work–life policies and in the creation of health-promoting workplaces across Europe.

Supplementary data

Supplementary data are available at *EURPUB* online.

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Conflicts of interest: None declared.

Data availability

The EWCS datasets are stored with the UK Data Service (UKDS) in Essex, UK and are publicly available via their website (<https://ukdataservice.ac.uk/>). Users are required to be registered with the UK Data Service. Users who register must accept the End User License (EUL), which is agreed to during the registration process.

Key points

- This study demonstrates a statistically significant positive association between work-life balance and work engagement across European welfare states.
- There is variance between European countries in work-life balance and this can in part be explained by welfare regime.
- Working men in Southern Europe and CEE are less likely to report work-life balance than working men in the Nordics, the same holds true for working women but only with regard to those in Southern Europe.
- Work-life balance is shaped by the socio-economic context and this should be considered in the design and implementation of future work-life policies and in the creation of health-promoting workplaces across Europe.
- The traditional focus on occupational safety and health in public health research must be expanded to include a focus on those factors that lead to healthy, satisfied and productive workers.

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Bottom-Up Interventions Effective in Promoting Work Engagement: A Systematic Review and Meta-Analysis

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Background: Promoting work engagement is of interest to organizations across sectors due to the associated positive outcomes. This interest warrants research on the evidence of work engagement interventions. Intervention research increasingly advocates a bottom-up approach, highlighting the role of employees themselves. These workplace interventions often encourage employees to identify, develop, and make use of workplace resources. The aim of this systematic review and meta-analysis is to investigate the effectiveness and potential underlying mechanisms of these bottom-up, resource-developing interventions.

Method: Systematic searches were conducted in the online databases Web of Science, Academic Search Complete, Business Source Ultimate, PsycInfo, PsycArticles, SCOPUS, and Google Scholar. Publication year range was 2000–2020. Eligibility criteria were defined using PICOS. To be eligible for the systematic review, the intervention study identified had to aim at promoting working individuals' work engagement by developing workplace resources from bottom-up. Work engagement had to be measured using the Utrecht Work Engagement Scale. The systematic review included one-, two-, or multiple-armed – randomized or non-randomized – intervention studies with various study designs. Further, a meta-analysis was conducted on a sub-set of the studies included in the systematic review. To be eligible for the meta-analysis, the studies had to be two- or multiple-armed and provide the information necessary to compute effect sizes.

Results: Thirty-one studies were included in the systematic review. The majority reported that overall work engagement increased as an effect of the intervention. The evidence regarding the sub-components of work engagement was scattered. Potential underlying mechanisms explored were intervention foci, approach, and format. Dimensions of satisfaction and performance were identified as secondary outcomes. Participant experiences were generally described as positive in most of the studies applying mixed methods. The meta-analysis showed a small but promising intervention effect on work engagement (24 studies, SMD: -0.22 , 95% CI: -0.34 to -0.11 , with $I^2 = 53\%$, indicating moderate inconsistency in the evidence).

Conclusion: The synthesized evidence suggests that bottom-up, resource-developing interventions are effective in the promotion of work engagement. The meta-analysis suggests that focusing on strengths use or mobilizing ego resources and adopting a universal approach increase intervention effectiveness.

Keywords: work engagement, workplace resources, bottom-up approaches, workplace interventions, systematic review, meta-analysis

INTRODUCTION

Ever since Kahn's (1990) seminal paper on "personal engagement" at work was published, the promotion of engagement has attracted the attention of scholars and practitioners alike. Given its well-documented association with outcomes of great value at the workplace, such as employee wellbeing and work performance (e.g., Bakker and Bal, 2010; Christian et al., 2011; Bailey et al., 2017), the interdisciplinary interest in engagement shows no signs of decline.

Numerous conceptualizations, definitions, and measures of engagement have emerged (for reviews, see Bailey et al., 2017; Shuck et al., 2017; Kelders et al., 2020). However, in the present study, we conceptualize engagement as work engagement: a positive, psychological state consisting of the three subcategories vigor, dedication, and absorption (Schaufeli et al., 2002). This definition of work engagement, provided by the Utrecht Group, is widely accepted. The measurement scale developed by the same research team [Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006)] is also extensively adopted (Bailey et al., 2017; Shuck et al., 2017; Kelders et al., 2020). Although some researchers (e.g., Wefald et al., 2012) have criticized this scale, its validity and reliability are supported by a strong evidence base (Schaufeli, 2014). In these two respects, the work engagement research domain is considered mature and intervention research is increasingly warranted (e.g., Leiter and Maslach, 2010).

A wide range of work engagement interventions is emerging, spanning from interventions focused on developing workplace resources (e.g., Bakker and van Wingerden, 2020), to interventions aimed at developing leaders (e.g., Biggs et al., 2014) and promoting healthy lifestyles (e.g., Strijk et al., 2013). In a rough sense, these interventions take either a top-down or a bottom-up approach. Whereas top-down interventions are initiated and driven by senior management, often with the intention to create organization-wide effects, bottom-up interventions are initiated and driven by employees and aim to make changes that have effects on the employees themselves and their immediate work environment (Hornung et al., 2010). Importantly, different factors are purported to impact the effectiveness of work engagement interventions depending on what changes are being made and by whom. Therefore, the conclusions drawn from one type of intervention may not be directly transferable to and comparable with other types. In the present systematic review and meta-analysis of work engagement interventions, we thus narrow our focus with respect to what changes are being made and by whom, which enables us to delve into

the effectiveness and mechanisms underlying interventions of the same type.

First, we focus on work engagement interventions aimed at developing workplace resources. Research on workplace resources has expanded rapidly during the past two decades due to the growing influence of theoretical frameworks, such as the conservation of resources (COR) theory (Hobfoll, 1989; Halbesleben et al., 2014), the job demands-resources model (JD-R; Demerouti et al., 2001), and the broaden-and-build theory (Fredrickson, 2001). In the present study, resources are broadly defined as "anything perceived by the individual to help attain his or her goals" (Halbesleben et al., 2014, p. 5). Following Nielsen et al. (2017), we focus specifically on workplace resources in this study, that is, resources that help individuals to attain their work-related goals and promote their work engagement. Workplace resources can be inherent in the working individuals themselves (e.g., self-efficacy, hope, optimism, and resilience), reside in their social context (e.g., supervisor and social support, team climate, and group-person fit), or be afforded by the way work is organized, designed, or managed (e.g., autonomy, skills variety, and job control; Nielsen et al., 2017). Hence, workplace resources are to a large extent psychosocial by nature and emerge from the interaction between the working individual and the workplace (Su et al., 2021).

Second, we limit our focus to work engagement interventions with bottom-up approaches. A growing number of scholars argue that organizations increasingly have to rely on employees' proactive behavior and engagement as working life is becoming more dynamic and organizations have less time to create resourceful work environments for their employees (e.g., Grant and Ashford, 2008; Bakker et al., 2012; Bakker, 2017). Consequently, it has been suggested that organizations can facilitate and support employees in developing workplace resources for the promotion of work engagement by offering interventions in which employees learn, practice, and implement individual bottom-up strategies. Bakker (2017) suggests four individual bottom-up strategies that can be taught: self-management, job crafting, strengths use, and mobilizing ego resources.

The current evidence base on the effectiveness of interventions aimed at promoting work engagement, in which employees themselves are encouraged to develop workplace resources, is limited. Some prior studies have taken a broader approach than the study at hand. A few narrative syntheses of the engagement literature focus on conceptual issues and on explaining the meaning, antecedents, and outcomes of various forms of employee engagement, not specifically targeting the work engagement

domain (e.g., Bailey et al., 2017; Shuck et al., 2017; Kelders et al., 2020). A previous narrative synthesis (Knight et al., 2019) and a systematic review with meta-analysis (Knight et al., 2017) both assess the overall effectiveness of a wide range of work engagement interventions (e.g., top-down and bodily health-focused interventions). In another study, Nielsen et al. (2017) systematically review and meta-analyze studies with various research designs (such as cross-sectional and longitudinal) focused on workplace resources to promote general employee wellbeing (e.g., work engagement, happiness, and job satisfaction) and performance. Other prior studies have taken a narrower approach than the study at hand. Specifically, prior meta-analytic studies on bottom-up interventions to promote work engagement narrow their focus to job crafting, thereby excluding other bottom-up strategies, such as mindfulness. Further, these meta-analyses evaluate additional outcomes to work engagement, such as job crafting behavior and work performance (Oprea et al., 2019), or include studies other than interventions, such as longitudinal and daily diary studies (Rudolph et al., 2017; Frederick and VanderWeele, 2020). In conclusion, previous review exercises on work engagement research have either been broader or narrower in their scope than the current study. To the authors' knowledge, the effectiveness of and the underlying mechanisms to effective interventions aimed at promoting work engagement by developing workplace resources from bottom-up have not yet been systematically reviewed and meta-analyzed.

Objectives and Research Questions

The aim of the present study was to conduct a systematic review and meta-analysis to synthesize the evidence base of interventions focused on promoting work engagement by developing workplace resources from bottom-up. It is our hope that the findings will guide not only future work engagement research and practice, but also that of the broader organizational psychology field. Specifically, we addressed the following research questions:

What is the evidence base for the effectiveness of bottom-up, resource-developing interventions targeting employees in the promotion of work engagement?

- Based on the systematic review and meta-analysis, what is the evidenced effectiveness of the identified interventions for work engagement (primary outcome)? What does the evidence say about other employee outcomes measured (secondary outcomes)?
- What study design is applied in the evidence-based work engagement interventions identified?
- What are the potential mechanisms underlying the evidence-based work engagement interventions identified?

MATERIALS AND METHODS

Study Protocol

We conducted the current study in accordance with the guidelines presented in the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) statement (Moher et al., 2009)

to the extent that they apply to non-medical research. These guidelines include following a checklist for reporting (see **Supplementary Data Sheet S1**). Our study approach (e.g., search strategies and data extraction) was also consistent with that of ample review exercises on work engagement published in the past (e.g., Knight et al., 2019).

Search Strategy

Our comprehensive search strategy included searches in seven international, scientific online databases, chosen with regard to the interdisciplinary nature of the research topic. Four of these were specialized EBSCO databases: Academic Search Complete, Business Source Ultimate, PsycInfo, and PsycArticles. The three additional online databases that we conducted searches in were Web of Science, SCOPUS, and Google Scholar. We included research published between January 2000 and December 2020. The main searches in databases were conducted between September 25 and October 14, 2020, and the same searches were repeated on February 22–23, 2021 in order to include records from the end of year 2020. The selected databases along with database-specific search strategies are described in detail in the supplemental material (see **Supplementary Data Sheet S2**).

In accordance with the standard PICOS approach (Participants, Interventions, Comparisons, Outcomes, and Study design; Moher et al., 2009), we defined the following eligibility criteria for the systematic review:

- intervention population target group was working individuals in any industry or organizational context worldwide;
- interventions were aimed at developing workplace resources from bottom-up (Hornung et al., 2010; Bakker, 2017);
- comparators, if any, were groups receiving no-intervention (i.e., waiting list and inactive) and/or other intervention;
- the primary outcome was overall work engagement or one of its sub-components (i.e., vigor, dedication, or absorption) and measured using the short or long version of the UWES-scale (Schaufeli and Bakker, 2003; Schaufeli et al., 2006);
- the study design was quantitative (one-, two-, or multiple-armed intervention studies with randomized or non-randomized allocation of participants), qualitative (e.g., interviews), or mixed (i.e., quantitative and qualitative study design combined).

Additionally, we adopted eligibility criteria relevant to our systematic review but not specified in PICOS. Specifically, these criteria were that the included studies should be published in peer-reviewed established journals (i.e., journals with an impact factor, not conference papers, dissertations, or books); written in English; focused on the promotion of work engagement (i.e., not focused on how to prevent decreased work engagement); and the presented study findings should be based on completed intervention studies (i.e., not study protocols). We included intervention studies in which individual bottom-up approaches and individual-level outcomes were in focus (i.e., participatory action interventions and/or aggregated outcome measures were

not considered), although the interventions included could be delivered in various ways (e.g., target groups of employees, individual employees, and online or face-to-face). Due to the psychological nature of the review primary outcome, we excluded studies that emphasized physiological resources related to lifestyle and bodily health (e.g., low blood pressure, yoga, and diet), rather than psychosocial resources related to the interaction between the individual and the workplace (which can be inherent in the individual, reside in the social context, or in the way work is organized). Since the target population was working individuals, we excluded studies focusing on the work engagement of other groups of individuals (e.g., students). No limitations were applied regarding the duration of the intervention program.

The meta-analysis was conducted on a sub-set of the studies included in the systematic review. To be eligible for the meta-analysis, the studies had to include a control group (i.e., waiting list, inactive, or other intervention) and provide eligible information to compute pooled effect sizes (alternatively information retrievable from other sources than the actual report).

Study Selection and Data Extraction

The first author managed the abstract screening process independently. The number of retrieved records from the selected databases and the process of screening and selecting studies can be viewed in the PRISMA Flow Diagram (Moher et al., 2009, see **Figure 1**). Next, the first and third author screened the full-text of records that had been assessed as eligible based on their abstracts. The quantified agreement between the raters was high (97% agreement, Cohen's $k=0.91$; Landis and Koch, 1977). In case of disagreement, the second author assessed the study and discussions were held until agreement was reached. When the final dataset of included studies and their reports was decided upon, the first author independently extracted and coded data available according to the Data Extraction Form (see **Supplementary Data Sheet S3**). Discussions regarding the data extraction, including the study categorization, were held between the three authors to ensure consistency. Data extracted from each included study were, e.g., author(s), year of publication, method, study setting (country of origin; industry), and key findings.

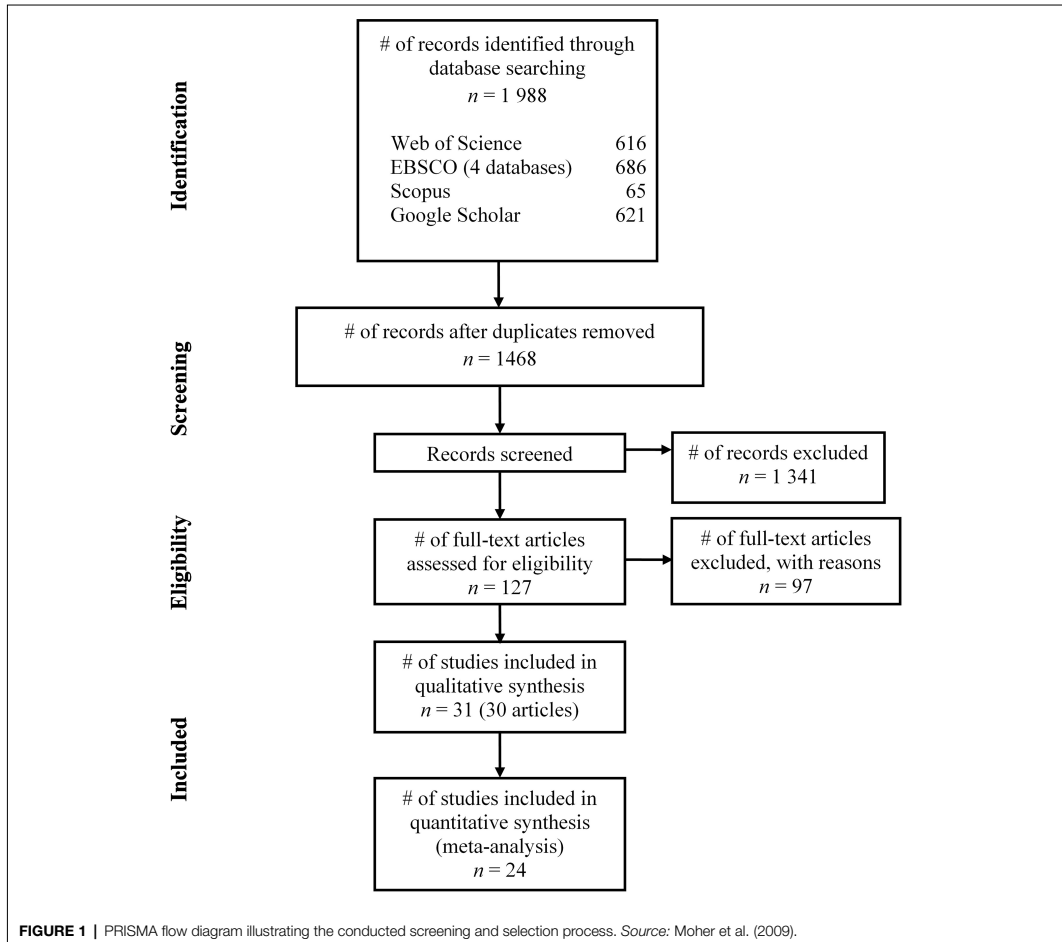
Quality Assessment

Quality assessment of the included intervention studies was conducted utilizing the recognized NICE checklist for intervention studies (National Institute for Health and Care Excellence, 2012, based on Spencer et al., 2003; Jackson et al., 2006). The study quality was primarily assessed by the first author followed by discussions among the authors, revealing no discrepancy between the authors' ratings. A summative quality score was coded for each study as ++, +, or – based on the assessed quality of study population, allocation of participants, outcomes, analyses, and internal and external validity. The highest quality rating (++) indicated low risk of bias, and this rating was given to studies that fulfilled all or most checklist criteria (and it was unlikely that the study conclusions would have been different if the few unfulfilled

criteria had been fulfilled). Similarly, a moderate-quality rating (+) indicated moderate risk of bias and this rating was given to studies in which some of the checklist criteria had been fulfilled. The conclusions would likely have remained the same if unfulfilled criteria had been fulfilled, or if poor descriptions of criteria had been adequate. Finally, the lowest quality rating (–) indicated high risk of bias. Studies that received this rating fulfilled few or no criteria and the study conclusions would likely have been different if the missing criteria had been fulfilled.

Calculation of Effect Sizes and Statistical Analyses

The effect sizes of the interventions were calculated by Review Manager 5.4.1 software (The Cochrane Collaboration, 2020) for the primary outcome under study (i.e., work engagement). Data from all the publications that provided eligible post-test or follow-up data on overall work engagement measured by the UWES-scale (i.e., no sub-scale data considered) were extracted from the study reports by the first author and then double checked and entered into the Review Manager by the third author. Both the weighted mean difference (WMD) and the standardized mean difference (SMD) were calculated as appropriate for the continuously distributed outcome using a random effects model. The random effects model was chosen based on guidelines and recommendations provided by, e.g., APA Publication Manual (Cohen, 1988) for increased interpretability and generalizability. Endpoint continuous data for intervention completers were used in these calculations. With regard to eligible studies with more than two arms, only the intervention-arm and the control-arm that received no intervention were considered in the meta-analysis. If measures of variance of outcomes could not be found in the study publications or through calculations, the corresponding authors of the identified publications were contacted with data requests. If the missing data could not be retrieved, the study was excluded from the meta-analysis. Substantially skewed data (where the standard deviation was greater than double the mean value) were not entered in the meta-analysis. The impact of statistical heterogeneity on the meta-analysis was assessed by quantifying inconsistency among the studies with the I^2 Index test (Deeks et al., 2008). This test describes the percentage of the variability in effect estimates that is due to heterogeneity rather than sampling error (chance). All calculated I^2 -values were deemed acceptable, however, all over 50% indicating the proportion of the variation in point estimates due to among-study differences being moderate to large. A sensitivity analysis was conducted to test the robustness of the performed analysis and related findings. Only the interventions that retrieved the highest quality rating (++) in the methodological quality assessment exercise were included in this sensitivity analysis. The extracted data also allowed for three post-hoc sub-group analyses; two of them according to two of the explored potential underlying mechanisms and one of them only including studies that applied the short version of the UWES (Schaufeli et al., 2006). The extracted data also allowed for a meta-analysis of pooled effect sizes for role performance (secondary outcome).



RESULTS

Studies Retrieved for the Systematic Review and Meta-Analysis

The total number of records originally identified in the systematic database searches was 1,988. After duplicates were removed, the abstracts of 1,468 unique records were screened according to the eligibility criteria. During this abstract screening process, an additional 1,341 records were excluded, leaving us with 127 records. Main reasons for exclusion of records at this stage were that they were not intervention studies, did not have work engagement as the primary outcome of the study, and/or were not targeted at working individuals. Following a careful assessment of full-text articles, the final number of articles included in the systematic review was 30, of which one contained two included studies (Gordon et al., 2018), resulting in 31 independent studies (see **Figure 1** and **Table 1**).

The main reasons for exclusion of articles that were assessed for eligibility in full-text were that they were judged to have a top-down rather than a bottom-up approach, emphasized physiological resources related to lifestyle and bodily health rather than psychosocial resources related to the interaction between the individual and the workplace, and/or did not use the UWES-scale for measuring work engagement. Also, a few of the excluded intervention studies were organizational level studies that did not target workers at the individual level. The number of studies that contributed with data to the meta-analysis was 24, and the sample size at baseline for these studies can be viewed in **Table 2**.

Methodological Quality of the Included Studies

The quality assessment exercise was challenging due to scant reporting in several studies. Poor descriptions of population,

TABLE 1 | Summary of core characteristics and main findings of the included studies in the systematic review and meta-analysis.

Author (year)	Quality appraisal ^a	Study setting	UWES-scale (version) ^b	Quantitative design	Qualitative design ^c	Foci	Approach	Format ^d	Reported finding (WE) ^e	Included in M-A ^f
Akkermans et al. (2015, Sample 2)	+	Netherlands; Industry not mentioned	Overall (short)	Two-armed (non-randomized) intervention	N/A	Career self-management	Tailored	F2F	Increased	Yes
Bakker and van Wingerden (2020)	++	Netherlands; Mixed Industries	Overall (short)	Two-armed (non-randomized) intervention	N/A	Strengths use	Universal	F2F	Increased	Yes
Bernburg et al. (2016)	++	Germany; Health care	Overall (short)	Two-armed (randomized) intervention	N/A	Ego resources	Universal	F2F	No effect	Yes
Coo and Salanova (2018)	+	Spain; Health care	Overall + sub-scales; vigor, dedication, absorption (short)	Two-armed (non-randomized) intervention	N/A	Ego resources	Universal	F2F	Increased	Yes
Costantini et al. (2019)	-	Italy; Health care	Overall (short; 5 items)	One-armed intervention	N/A	Strengths use	Universal	F2F	Increased	No
Dubbelt et al. (2019, Study 2)	+	Netherlands; Education	Overall (short; vigor and dedication-items)	Two-armed (non-randomized) intervention	N/A	Job crafting	Tailored	F2F	Increased	Yes
Dyrbye et al. (2016)	++	United States; Health care	Sub-scale; absorption (long)	Two-armed (randomized) intervention	N/A	Strengths use	Tailored	Online	No effect	No
Gollwitzer et al. (2018)	++	Germany; Health care	Overall (short)	Three-armed (randomized) intervention	N/A	Ego resources	Universal	Online	Increased	Yes
Gordon et al. (2018, Study 1)	+	Netherlands; Health care	Overall (short)	Two-armed (non-randomized) intervention	N/A	Job crafting	Tailored	F2F	Increased	Yes
Gordon et al. (2018, Study 2)	+	Netherlands; Health care	Overall (short)	Two-armed (non-randomized) intervention	N/A	Job crafting	Tailored	F2F	Increased	Yes
Kloos et al. (2019)	++	Netherlands; Health care	Overall (short)	Two-armed (randomized) intervention	Open-ended feedback (in questionnaire)	Strengths use	Universal	Online	No effect	Yes
Kuipers et al. (2020)	+	Netherlands; Health care	Sub-scales; vigor, dedication, absorption (short)	Two-armed (non-randomized) intervention	N/A	Job crafting	Universal	F2F	Increased	Yes*
Lases et al. (2016)	+	Netherlands; Health care	Overall (short)	Two-armed (non-randomized) intervention	Open-ended feedback (phone interviews)	Ego resources	Universal	F2F	No effect	Yes
Mastenbroek et al. (2015)	+	Netherlands; Health care	Overall (short)	Two-armed (non-randomized) intervention	Face-to-face interviews	Job crafting	Universal	F2F	No effect	Yes
Meyers & van Woerkom (2017)	++	Netherlands; Mixed Industries	Overall (short)	Two-armed (non-randomized) intervention	N/A	Strengths use	Universal	F2F	No effect	No
Muuraskangas et al. (2016)	-	Finland; Engineering	Overall (short)	One-armed intervention	Phone interviews	Ego resources	Tailored	Online	No effect	No
Oude Hengel et al. (2012)	++	Netherlands; Engineering	Overall + sub-scales; vigor, dedication, absorption (short)	Two-armed (randomized) intervention	N/A	Ego resources	Tailored	F2F	No effect	Yes
Ouweneel et al. (2013)	++	Netherlands; Mixed Industries	Overall (short)	Two-armed (non-randomized) intervention	N/A	Strengths use	Tailored	Online	No effect	Yes

(Continued)

TABLE 1 | Continued

Author (year)	Quality appraisal ^a	Study setting	UWES-scale (version) ^b	Quantitative design	Qualitative design ^c	Foci	Approach	Format ^d	Reported finding (WE) ^e	Included in M-A ^f
Peláez et al. (2020)	+	Spain; Engineering	Overall (short)	Two-armed (non-randomized) intervention	Open-ended question face-to-face	Strengths use	Universal	F2F	Increased	Yes
Peláez Zuberbuhler et al. (2020)	+	Spain; Engineering	Overall (short)	Two-armed (non-randomized) intervention	Open-ended question face-to-face	Strengths use	Universal	F2F	Increased	Yes
Sakuraya et al. (2016)	-	Japan; Mixed industries	Overall (short)	One-armed intervention	N/A	Job crafting	Universal	F2F	Increased	No
Sakuraya et al. (2020)	++	Japan; Mixed industries	Overall (short)	Two-armed (randomized) intervention	N/A	Job crafting	Universal	F2F	No effect	Yes
Seppälä et al. (2020)	+	Finland; Education	Overall (short)	Two-armed (non-randomized) intervention	Open-ended feedback (in questionnaire)	Job crafting	Tailored	F2F	Decreased	Yes
van Berckel et al. (2014)	++	Netherlands; Education	Overall (long)	Two-armed (randomized) intervention	Face-to-face interviews	Ego resources	Tailored	F2F	No effect	Yes
van Wingerden et al. (2016)	+	Netherlands; Health care	Overall (short)	Two-armed (non-randomized) intervention	N/A	Job crafting	Universal	F2F	Increased	Yes
van Wingerden et al. (2017a)	+	Netherlands; Education	Overall (short)	Two-armed (non-randomized) intervention	N/A	Job crafting	Tailored	F2F	Increased	No
van Wingerden et al. (2017b)	+	Netherlands; Education	Overall (short)	Two-armed (non-randomized) intervention	N/A	Job crafting	Tailored	F2F	No effect	Yes
van Wingerden et al. (2017c)	+	Netherlands; Education	Overall (short)	Four-armed (non-randomized) intervention	Face-to-face interviews	Job crafting	Tailored	F2F	Increased	No
Venveij et al. (2016)	+	Netherlands; Health care	Overall + sub-scales; vigor, dedication, absorption (long)	Two-armed (non-randomized) intervention	Open-ended feedback face-to-face/in evaluation forms	Ego resources	Tailored	F2F	Increased (only dedication)	Yes
Vuori et al. (2012)	++	Finland; Mixed industries	Overall (short)	Two-armed (randomized) intervention	N/A	Career self-management	Tailored	F2F	Increased	Yes
Vuori et al. (2019)	++	Finland; Mixed industries	Overall (short)	Two-armed (randomized) intervention	N/A	Career self-management	Tailored	F2F	Increased	Yes

^aQuality appraisal: ++ = high-quality score, + = moderate-quality score, and - = low-quality score.
^bUWES-scale: Overall = work engagement measured as a high-order construct; Sub-scale(s) = sub-components of work engagement measured (i.e., dedication, absorption, and/or vigor). Version: short = 9 items; long = 17 items.
^cQualitative design: N/A = not applicable.
^dFormat: F2F = face-to-face.
^eReported finding: WE = work engagement.
^fM-A: M-A = meta-analysis.
 *Data on overall work engagement retrieved from another source than the actual published report.

TABLE 2 | Sample size at baseline of studies included in the meta-analysis.

Author (year)	Sample size at baseline (intervention)	Sample size at baseline (control)	Sample size at baseline (total)
Akkermans et al. (2015, Sample 2)	72	41 ^a	113
Bakker and van Wingerden (2020)	54	48 ^a	102
Bernburg et al. (2016)	26	28 ^a	54
Coo and Salanova (2018)	19	15 ^a	34
Dubbelt et al. (2019, Study 2)	60	59 ^a	119
Gollwitzer et al. (2018)	41	47 ^a	88
Gordon et al. (2018, Study 1)	48	71 ^a	119
Gordon et al. (2018, Study 2)	32	26 ^a	58
Kloos et al. (2019)	79	49 ^a	128
Kuijpers et al. (2020)	45	54 ^a	99
Lases et al. (2016)	22	47 ^a	69
Mastenbroek et al. (2015)	21	9 ^a	30
Oude Hengel et al. (2012)	171	122 ^a	293
Ouweneel et al. (2013)	878	1330 ^a	2,208
Peláez et al. (2020)	35	25 ^a	60
Peláez Zuberbuhler et al. (2020)	23	15 ^a	38
Sakuraya et al. (2020)	138	143 ^a	281
Seppälä et al. (2020)	21	19 ^a	40
van Berkel et al. (2014)	129	126 ^a	255
van Wingerden et al. (2016)	43	24 ^a	67
van Wingerden et al. (2017b)	45	30 ^a	75
Verweij et al. (2016)	43	20 ^a	63
Vuori et al. (2012)	365	341 ^b	706
Vuori et al. (2019)	355	337 ^b	692

^aNo intervention control group.

^bOther intervention control group.

allocation of participants (if applicable), and statistical analyses performed were especially common shortcomings of the study reports assessed. Based on the reported information, three studies received a low-quality score, indicating high risk of bias. In comparison, 16 studies received a moderate-quality score, indicating moderate risk of bias, and 12 received a high-quality score, indicating low risk of bias. The overall quality score for each study can be viewed in **Table 1**.

Characteristics of the Included Studies

General Characteristics

In **Table 1**, core characteristics and main findings of the 31 systematically reviewed studies (total sample size, $n=6,708$)

are summarized. Study sample sizes ranged between 34 (Coo and Salanova, 2018) and 2,208 (Ouweneel et al., 2013). Akkermans et al. (2015) have two samples, of which only one (sample 2) was included in the review since sample 1 consisted of students. The gender distribution between samples varied (4–99.32% male), as did average age of participants at baseline (27–58.1 years for those studies which provided this data, $n=29$). The included studies were conducted in several different industries, such as the education sector (Dubbelt et al., 2019, Study 2; van Berkel et al., 2014; van Wingerden et al., 2017a,b,c; Seppälä et al., 2020), the engineering sector (Oude Hengel et al., 2012; Muuraiskangas et al., 2016; Peláez et al., 2020; Peláez Zuberbuhler et al., 2020), and the health care sector – the most frequently represented industry ($n=13$). It was also relatively common that the included studies were based on a sample composed of participants from mixed industries ($n=7$). Industry was not reported in one of the included studies (Akkermans et al., 2015). Regarding the geographical context, a clear majority of the included studies were conducted in Europe ($n=28$). Of the European studies, as many as 18 studies were conducted in The Netherlands. Another European country, Finland, was also quite well represented with four studies. Only three studies were conducted outside Europe, in Japan ($n=2$) and United States ($n=1$). Program duration varied extensively across studies, ranging from half a day (Meyers and van Woerkom, 2017) to 10 months (Mastenbroek et al., 2015). The intervention program in 10 studies lasted 1 month or less, 14 studies more than 1 month but less than 3 months, and seven studies 3 months or longer. Regarding publication year, none of the included studies were published prior to 2012. The majority of the included studies was conducted in the last 5 years, peaking in 2016 ($n=7$). Regarding the publication outlet, the most common journals were *Journal of Vocational Behavior* ($n=4$), *Frontiers in Psychology* ($n=3$), *Journal of Happiness Studies* ($n=3$), *European Journal of Work and Organizational Psychology* ($n=2$), *Journal of Occupational Health Psychology* ($n=2$), and *Human Resource Management* ($n=2$). The rest of the represented journals published one article each. The included interventions were categorized in different groups to explore potential mechanisms underlying their effectiveness:

Potential Mechanisms Underlying the Intervention Effectiveness

Intervention Foci

Intervention focus, i.e., the content of the intervention program and the workplace resources in focus for development, varied. We categorized the interventions according to focus into four different groups based on the proactive bottom-up approaches put forth by Bakker (2017).

The first group of interventions had a strength-based approach ($n=8$) and was underpinned by positive psychology frameworks. These interventions were designed to encourage the participants to identify, develop, and use their inner strengths and talents, with the intention to make them function optimally, perform well, and engage in their work. The majority (Ouweneel et al., 2013; Meyers and van Woerkom, 2017; Kloos et al., 2019;

Bakker and van Wingerden, 2020; Peláez et al., 2020; Peláez Zuberbuhler et al., 2020) included development of psychological capital or its sub-components (i.e., self-efficacy, hope, optimism, and resilience) for the promotion of work engagement. Other resources that were developed in this group of interventions included self-esteem, assertiveness, and positive affect.

The second group of interventions was focused on mobilizing ego resources ($n=8$). Participants proactively developed their inherent energetic, affective, or cognitive resources. Six interventions were based on various forms of mindfulness (e.g., mindfulness-based stress reduction, mind fitness training, and mindful vitality in practice), two of them combined with other training components (such as training in strengths use, stress management, and obtaining social support). The two remaining interventions evaluated a stress reduction program (including mental contrasting) and an empowerment program.

Three studies (Vuori et al., 2012, 2019; Akkermans et al., 2015) shared the third focus: career self-management. Participants conducted various exercises, in which they reflected on and developed their own career skills and competencies (e.g., assertiveness), work ability (e.g., social skills and networking), and employability (e.g., find interesting new tasks). A trustful and supportive environment was crucial as the intervention involved active learning, brainstorming, social modeling, and roleplaying. Participants practiced self-goal setting, drew up personal work-related plans, and prepared for potential setbacks.

Job crafting was the fourth and most dominant focus identified in the retrieved studies ($n=12$). The participants were encouraged to make proactive changes in resources external to themselves, i.e., in their job characteristics and social relationships at work. The participants took part of information on and practiced general personal job crafting strategies, after which they developed and implemented their own personal crafting plans. One intervention trained participants in job crafting by means of visual arts. To increase effectiveness, studies added experiential learning techniques (Gordon et al., 2018, Study 1 & Study 2; Dubbelt et al., 2019), exercises aimed at aligning job tasks with inner strengths and abilities (Mastenbroek et al., 2015; van Wingerden et al., 2016, 2017a,b,c; Kuijpers et al., 2020), and cognitive training to redefine one's work situation (Sakuraya et al., 2016, 2020).

The interventions focusing on strengths use, mobilizing ego resources, and career self-management all share the characteristic that they predominantly developed resources inherent in the individual employees themselves. In contrast, the core of the interventions focused on job crafting was to develop resources that resided in the participants' social work context and the way work was organized.

Intervention Approach

The intervention studies were also categorized in two different groups depending on whether they applied a universal approach, or an approach tailored to the target group's specific needs.

In the interventions applying a universal approach ($n=15$), the intervention program was generic, and the exercises, methods, and techniques used could equally well have been delivered to other groups of workers. While participants in most of these

interventions were encouraged to decide for themselves what resources they wanted to develop during the program, the design and implementation of the program components were not specifically tailored to the work context of the participants and population-specific needs and preferences were not targeted.

The tailored interventions ($n=16$) were at least partially crafted for the targeted population. The whole intervention program was tailored in eight interventions. That is, the intervention design was informed by interviews and meetings with managers and workers from participating organizations, and in some cases also with other stakeholders, pre-assessment questionnaires, and/or a robust literature on population-specific needs and preferences. Three other interventions were tailored in the sense that they included active teaching and learning methods. This meant that the participants' own knowledge and work context, not lectures, were the starting point for the interventions. The intervention content was thus very specific and applicable to the participants' real-life work situation. Similarly, a tailored aspect was described in five interventions, such as the inclusion of practical examples in training sessions or text and pictures in booklets that were adapted to the population in question.

Intervention Format

Intervention format refers to how the interventions were delivered to the participants. We categorized the interventions according to format in two different groups.

First, five interventions were delivered through an online format (Ouweneel et al., 2013; Dyrbye et al., 2016; Muuraiskangas et al., 2016; Gollwitzer et al., 2018; Kloos et al., 2019). These were app- or web-based and focused on individual exercises that the participants completed online, tasks that they undertook in their everyday working life, and educational elements. One intervention included gamified aspects (e.g., use of avatars and tailored automatic feedback). In another intervention, participants were offered the possibility to share their experiences by engaging in online group discussions with other participants and an e-coach.

The second group of interventions was clearly dominant. Here, interventions were delivered face-to-face ($n=26$). Seven interventions were facilitated by the researchers, four by trainers working in the organization, 11 by external experts, and three by both researchers and external experts. Regardless of facilitator, the intervention core was training sessions conducted in a group setting. Participants were educated in bottom-up strategies that were discussed and applied individually, in pairs, or in larger groups. In 23 interventions, participants were additionally assigned with minor individual tasks and exercises or provided with coaching to increase effectiveness. For example, participants could receive a booklet containing learning materials, exercises, or space to write down individual goals or reflections.

Evidence Statements

Effects on Work Engagement

All studies included in the systematic review ($n=31$) applied quantitative data analysis approaches; 10 of these also applied qualitative data analysis methods. The effect on overall work

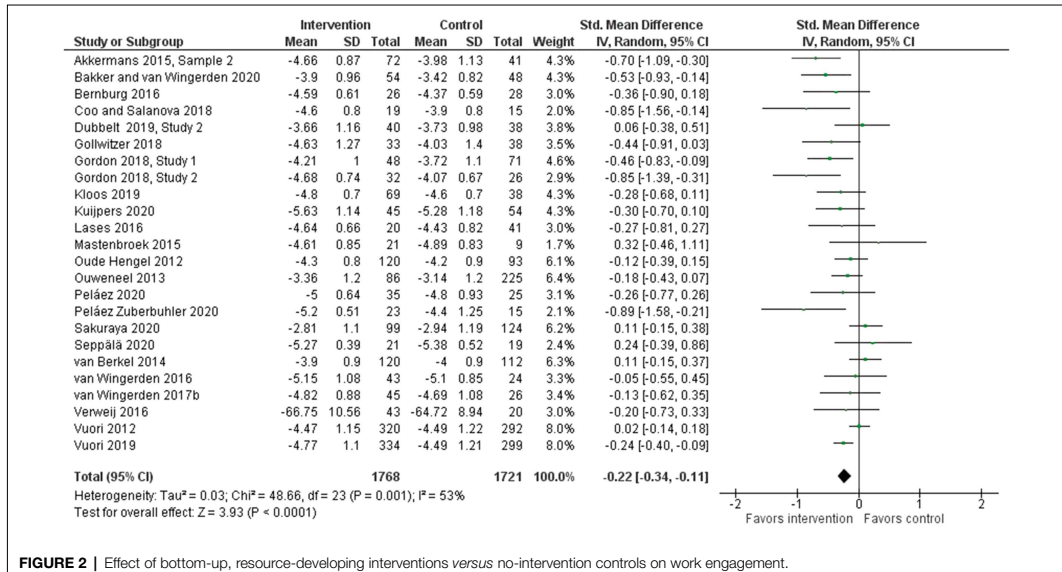


FIGURE 2 | Effect of bottom-up, resource-developing interventions versus no-intervention controls on work engagement.

engagement (measured as a higher-order construct by the UWES-scale; Schaufeli et al., 2006) was reported in 30 studies (see Table 1). Among them, increased work engagement was reported in 16 studies (ca 53% of the studies); however, in the study of Vuori et al. (2012), work engagement only increased in one-side testing. Lack of effect was reported in 13 studies (ca 43% of the studies) and a significant decrease in work engagement was reported in one study (Seppälä et al., 2020). In total, five studies (Oude Hengel et al., 2012; Dyrbye et al., 2016; Verweij et al., 2016; Coo and Salanova, 2018; Kuijpers et al., 2020) reported effects on at least one of the three sub-components of work engagement as measured by the UWES-scale (Schaufeli et al., 2006). The effect on vigor was reported in four studies: vigor increased in one study (Coo and Salanova, 2018) and did not change in three studies (Oude Hengel et al., 2012; Verweij et al., 2016; Kuijpers et al., 2020). Dedication was measured in four studies, of which three reported a positive significant effect (Verweij et al., 2016; Coo and Salanova, 2018; Kuijpers et al., 2020) and one no significant effect (Oude Hengel et al., 2012). Finally, the effect on absorption was reported in five studies, of which two reported a positive effect (Coo and Salanova, 2018; Kuijpers et al., 2020) and three no effect (Oude Hengel et al., 2012; Dyrbye et al., 2016; Verweij et al., 2016).

In the meta-analysis with pooled data comparing the effects of interventions to no-intervention ($n=22$) or other intervention (Vuori et al., 2012, 2019) controls, work engagement (as measured by the short or long version of the UWES-scale) showed a small but promising statistically significant improvement (24 interventions, SMD: -0.22 , 95% CI: -0.34 to -0.11 ; Figure 2). The analysis showed moderate heterogeneity ($I^2 = 53\%$), indicating some inconsistency of the calculated effect size. In a sub-group analysis

only including the interventions using the short version of the UWES-scale, the pooled effect size remained nearly the same (23 interventions, WMD: -0.21 , 95% CI: -0.32 to -0.10), with $I^2 = 55\%$.

Evidence statement 1: The synthesized evidence shows that bottom-up interventions aimed at promoting work engagement by developing workplace resources are effective. The evidence base on the effectiveness of interventions for the promotion of overall work engagement is both stronger and more promising than that for the promotion of sub-components of work engagement. The conducted meta-analysis revealed a small but promising statistically significant improvement in overall work engagement across the identified interventions.

Effects on Secondary Outcomes: Satisfaction and Performance

A few of the studies included in the systematic review, all conducted with work engagement as the primary outcome, also reported the effectiveness of the intervention on secondary outcomes. Among these additional outcomes, dimensions of satisfaction and performance were frequently reported.

The intervention effect on dimensions of satisfaction was reported in seven studies, of which all except one reported increased satisfaction. The intervention effect on job satisfaction was reported in three studies, of which two (Bernburg et al., 2016; Kloos et al., 2019) reported a statistically significant increase in job satisfaction. In contrast, Dyrbye et al. (2016) reported a significant decrease in job satisfaction and additionally no statistically significant effect on satisfaction with work-life

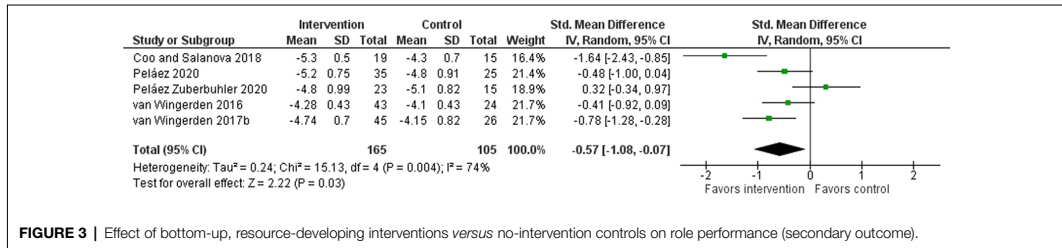


FIGURE 3 | Effect of bottom-up, resource-developing interventions versus no-intervention controls on role performance (secondary outcome).

balance. Finally, a statistically significant positive effect was reported in one study each on work satisfaction (Lases et al., 2016), career satisfaction (Dubbelt et al., 2019, Study 2), basic need satisfaction (van Wingerden et al., 2017a), and life satisfaction (Meyers and van Woerkom, 2017).

The intervention effect on dimensions of performance was reported in nine studies. A statistically significant increase in performance was reported in all of them, in terms of task performance (Dubbelt et al., 2019, Study 2), adaptive, task and contextual (but not objective) performance (Gordon et al., 2018, Study 1 & Study 2), and (in-/extra-) role performance (van Wingerden et al., 2016, 2017a,b,c; Coo and Salanova, 2018; Peláez et al., 2020; Peláez Zuberbuhler et al., 2020). All these measures of performance were assessed with a variety of measurements, such as the Healthy & Resilient Organization (HERO) questionnaire (Salanova et al., 2012), the in-role performance scale (Williams and Anderson, 1991), and Goodman and Syvante's (1999) task and contextual performance scale.

A meta-analysis was conducted on a sub-set of studies that reported the intervention effect on role performance specifically and that provided eligible information to compute pooled effect sizes. In this meta-analysis, role performance showed a moderate to large and statistically significant improvement (five interventions, SMD: -0.57, 95% CI: -1.08 to -0.07; **Figure 3**). The analysis showed high heterogeneity ($I^2 = 74\%$), indicating high inconsistency of the calculated effect size.

Evidence statement 2: In the synthesis, scattered evidence was found on the effectiveness of bottom-up interventions in promoting satisfaction at work, as well as scarce but promising evidence for promoting performance. The conducted meta-analysis on the intervention effectiveness on role performance showed a moderate to large and statistically significant improvement – but also revealed a high heterogeneity, which makes for caution in interpreting the results. The results on these secondary outcomes were found even though the primary intervention aim was to promote work engagement by developing workplace resources. This indicates that bottom-up interventions for the promotion of work engagement also have potential to yield other positive outcomes in addition to work engagement, and therefore future workplace intervention research should include measurements of, e.g., satisfaction and performance – applying standardized and comparable instruments.

Comparing the Effectiveness of the Interventions Based on Their Foci

To investigate the most effective intervention foci in relation to the primary outcome under study, further analysis was carried out as part of the meta-analysis exercise for those controlled interventions that were categorized as focusing on strengths use (Ouwenel et al., 2013; Kloos et al., 2019; Bakker and van Wingerden, 2020; Peláez et al., 2020; Peláez Zuberbuhler et al., 2020); mobilizing ego resources ($n=7$); career self-management (Vuori et al., 2012, 2019; Akkermans et al., 2015); and job crafting ($n=9$). The strengths use category showed a promising and statistically significant effect on work engagement (SMD: -0.34, 95% CI: -0.54 to -0.14). The category mobilizing ego resources had at most a small statistically significant effect (SMD: -0.21, 95% CI: -0.42 to 0.00). In contrast, the two remaining categories did not show any statistically significant effect: career self-management (SMD: -0.26, 95% CI: -0.56 to 0.05) and job crafting (SMD: -0.14, 95% CI: -0.36 to 0.08). See **Figure 4**.

Evidence statement 3: The analysis comparing the pooled data on effectiveness between four intervention categories indicates that intervention focus is a mechanism underlying the intervention effect on work engagement, providing convincing evidence for the category of interventions focusing on strengths use. The analysis also supports the intervention category focusing on mobilizing ego resources, while the two categories encompassing interventions with a career self-management or a job crafting focus failed to show any pooled significant effects.

Comparing the Effectiveness of the Interventions Based on Their Approach

The work engagement interventions comparing intervention participants with no-intervention participants were also compared according to intervention approach. While interventions with both universal and tailored programs had a statistically significant positive effect on work engagement, the effect of interventions with a universal approach was larger ($n=12$, SMD: -0.29, 95% CI: -0.47 to -0.10) compared to that of interventions with a tailored approach ($n=12$, SMD: -0.18, 95% CI: -0.33 to -0.04). See **Figure 5**.

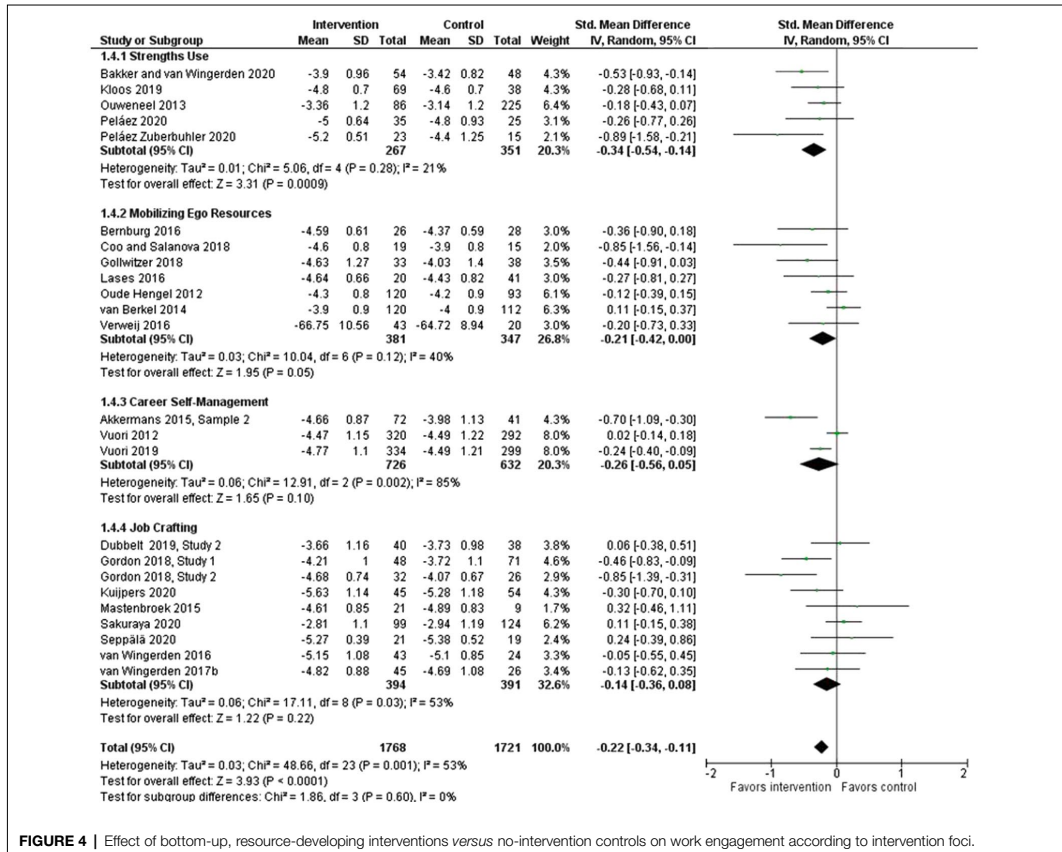


FIGURE 4 | Effect of bottom-up, resource-developing interventions versus no-intervention controls on work engagement according to intervention foci.

Evidence statement 4: Based on the meta-analysis comparing the evidenced effect sizes between two intervention approaches, it can be argued that the approach of the interventions delivered is a central mechanism underlying the intervention effectiveness on work engagement, with a larger effect size for a universal approach compared to a tailored approach.

Sensitivity Analysis

To investigate the robustness of the analyses performed as part of the meta-analysis and related findings, a sensitivity analysis was performed. Here, only the interventions deemed rigorous in their study design and with low risk of bias (i.e., scored with ++) in the quality assessment exercise were included. Based on the sensitivity analysis, we argue that the findings from the meta-analysis are robust, despite the inclusion of interventions with varying design and quality. Considering the high-quality interventions only, the overall effect of interventions on work engagement remained statistically significant

(10 interventions, SMD: -0.14, 95% CI: -0.27 to -0.01), indicating a small but promising positive effect on work engagement among the intervention participants compared to control conditions. The heterogeneity (*I*²) of the sensitivity analysis was 52%.

Participant Experiences of the Interventions

Ten of the 31 reviewed intervention studies adopted mixed methods, meaning that they combined quantitative measures with qualitative data, which entailed reporting on participants' experiences of and reflections on the intervention design, outcome, or both. Participant experiences were gathered through interviews and open-ended questions in questionnaires and training sessions.

Specifically, participant experiences related to the intervention design were reported in five studies (van Berkel et al., 2014; Lases et al., 2016; Muuraiskangas et al., 2016; Kloos et al., 2019; Seppälä et al., 2020). The participant experiences were predominantly positive in three of the studies (van Berkel et al., 2014; Lases et al., 2016; Muuraiskangas et al., 2016).

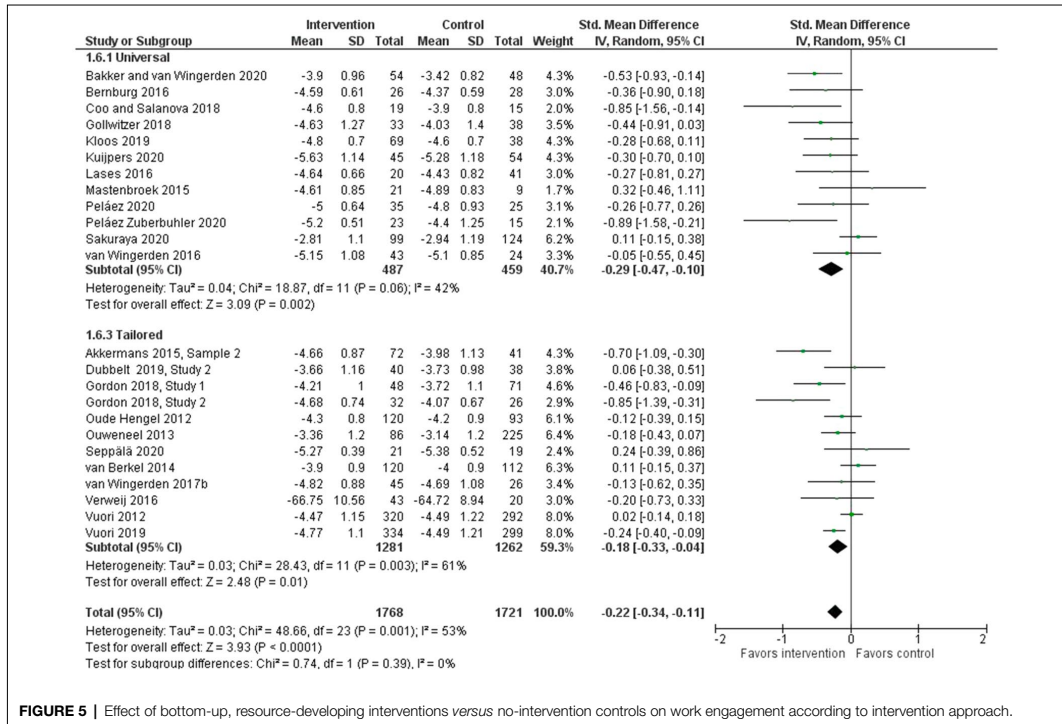


FIGURE 5 | Effect of bottom-up, resource-developing interventions versus no-intervention controls on work engagement according to intervention approach.

The interventions in these studies were described as innovative, interesting, and useful, and the content was found to be easy to understand and appreciated by the participants regardless of used format (i.e., online or face-to-face). Seppälä et al. (2020) mostly reported negative experiences, such as perceived flaws in information, quality and structure of the intervention, and the professional skills of the trainers. In the study conducted by Kloos et al. (2019), participant experiences of the intervention design were mixed, with some experiencing that the content was relevant while others did not, and the majority perceived the intervention set-up as an area of improvement. In the studies conducted by Muuraiskangas et al. (2016) and Seppälä et al. (2020), participants experienced difficulties in balancing participation in the intervention with work-related obligations, as these interventions were conducted during work hours.

Similarly, all mixed-methods studies except for Seppälä et al. (2020) reported on how the participants experienced the intervention outcome. All these studies reported that the majority of participants experienced the effect of the intervention, if any, as positive. For example, participants experienced enhanced work engagement (Mastenbroek et al., 2015), well-being (Muuraiskangas et al., 2016; Verweij et al., 2016; Peláez et al., 2020), energy (van Berkel et al., 2014; Verweij et al., 2016), and performance (Peláez et al., 2020, Peláez Zuberbuhler et al., 2020) post-intervention. Further,

the participants described how the intervention had supported them in developing crucial workplace resources at multiple levels, both resources that the intervention specifically targeted, and other ones. Such resources included awareness of own thoughts, emotions, and behavior (Mastenbroek et al., 2015; Muuraiskangas et al., 2016; Verweij et al., 2016; Kloos et al., 2019; Peláez et al., 2020; Peláez Zuberbuhler et al., 2020). Participants also experienced that they developed resources in terms of self-acceptance, self-esteem, and compassion toward oneself and others as additional positive effects of the interventions (Mastenbroek et al., 2015; Verweij et al., 2016). In six studies (van Berkel et al., 2014; Lases et al., 2016; Verweij et al., 2016; van Wingerden et al., 2017c; Peláez et al., 2020; Peláez Zuberbuhler et al., 2020), the qualitative results on the intervention outcomes to a great extent supported the quantitative ones, while the reported qualitative results in three studies clearly differed from the quantitative in that they were more positive (Mastenbroek et al., 2015; Muuraiskangas et al., 2016; Kloos et al., 2019).

Evidence statement 5: There is promising evidence that bottom-up interventions aimed at promoting work engagement by developing workplace resources are well received among the participants and generate positive experiences among them.

DISCUSSION

The present study aimed to systematically review the evidence base of interventions conducted for the promotion of work engagement by developing workplace resources from bottom-up. Further, the aim was to perform a statistical meta-analysis of the eligible evidence, as well as to explore mechanisms underlying the evidenced effectiveness, if any.

The results lend support to the effectiveness of the investigated interventions for the promotion of overall work engagement. This is in accordance with multiple theoretical frameworks, such as the COR theory (Hobfoll, 1989; Halbesleben et al., 2014), the JD-R model (Demerouti et al., 2001), and the broaden-and-build theory (Fredrickson, 2001). Specifically, the systematic review showed that 53% of the 30 studies that measured work engagement as a higher-order construct reported an improvement. This finding was corroborated in the meta-analysis, which was based on 24 studies and demonstrated a small but positive statistically significant effect on overall work engagement. This positive intervention effect is suggested to be widely applicable, at least in European settings, as it was found by systematically reviewing and meta-analyzing studies conducted in various industries and across various groups of workers.

Unfortunately, we only found a small number of studies investigating the intervention effect on sub-components of work engagement (as defined in the UWES-scale; Schaufeli et al., 2006). Therefore, it would not have been feasible to conduct a sub-analysis on the sub-components in the meta-analysis. The systematic review found scattered evidence for the effect on vigor, dedication, and absorption. According to a previous review of the meaning, antecedents, and outcomes of engagement, measuring sub-components of work engagement tends to yield more complex results than measuring overall work engagement (Bailey et al., 2017). Similarly, we found scattered evidence for a positive intervention effect on the secondary outcome satisfaction at work, and scarce but promising evidence for intervention effectiveness on the secondary outcome performance at work. Hence, we encourage future workplace intervention research to include these outcomes and measure them using standardized and comparable instruments.

The meta-analysis of the interventions according to intervention foci, which were based on the individual bottom-up approaches suggested by Bakker (2017), showed that strengths use and mobilizing ego resources interventions both had a positive statistically significant effect on work engagement. In contrast, career self-management and job crafting interventions did not. The failure to find a significant pooled effect for interventions focused on career self-management is likely due to lack of power, which in turn is the result of high heterogeneity ($I^2 = 85\%$) and of there being few studies in this group (only three studies had this focus). However, the sub-group difference between intervention foci in this analysis was not statistically significant. As previously noted by Knight et al. (2017), one explanation for this may be heterogeneity within the sub-groups. Although we did our best in the current review to classify the interventions according to their most dominant focus,

we acknowledge that they seldom had one focus only. For example, job crafting interventions included self-goal setting, which is an individual self-management approach (Bakker, 2017). Another potential explanation may be that the categorization of bottom-up approaches proposed by Bakker (2017) is not optimal for categorizing bottom-up interventions. However, this study still highlights that interventions focused on strengths use and mobilizing ego resources are more effective in promoting work engagement than interventions focused on career self-management and job crafting.

The meta-analysis of the intervention effectiveness according to approach showed that both universal and tailored interventions had a statistically significant effect on work engagement compared to control conditions. Further, a statistically significant sub-group difference between intervention approach was found in this analysis, where universal intervention programs were more promising than tailored ones. Although it may be less theoretically attractive, two obvious strengths of taking a universal approach are that it increases generalizability and that it is less time-consuming. Interestingly, in studies where a tailored approach was applied, this was usually highlighted as a strength of the study. At the same time, it was rarely explained on what basis a tailored study approach was developed and it may be that a universal approach would have been at least equally effective in at least some of these studies. The studies that apply a tailored intervention approach also varied extensively regarding the degree to which they were tailored. While the whole intervention program was tailored in some studies, only aspects of the intervention program were tailored in others. It might be that considerable effort has to be made to map the targeted populations' needs and preference (e.g., conducting a pilot study) and that the intervention needs to be substantially tailored for its effectiveness to increase.

Finally, as part of the systematic review, we examined qualitative data from 10 mixed-methods studies to summarize participant experiences of the intervention design and outcomes. We found that the participants in most of these studies generally appreciated the intervention design. For example, the participants reported that the program content was easy to understand and experienced as useful and interesting. It should be noted though that in all interventions, participants were responsible for initiating and making changes in their own workplace resources. Simply experiencing that one's own proactivity is supported and valued can on its own be motivating and thus induce positive feelings toward the design of the intervention. Additionally, in some mixed-methods studies, the participants described the experienced outcomes in more positive terms in the qualitative data than in the quantitative. We can only speculate why this was the case, but it is possible that the participants felt obligated to provide more positive answers in the qualitative data since these data were often gathered through interviews or meetings occurring face-to-face, while the quantitative data were based on anonymous responses. Further, participants reported that they also experienced positive effects other than those intended in the program, such as developing additional resources. Hence, when participants learn, practice, and implement individual bottom-up approaches in work engagement interventions, it seems that the effects even go beyond the desired outcomes.

Reported Limitations Among the Included Studies

The included studies reported several limitations. Commonly reported shortcomings of the interventions were reliance on self-reports (risk of common method variance), small sample size or high dropout rates (risk of low statistical power), limited generalizability of the study findings (focus on certain industrial and geographical contexts and groups of workers) and that the results were short-term ones (no information on long-term effects). Intervention studies with no comparator and studies with non-randomized intervention and comparator groups often reported these study characteristics as important limitations.

Limitations of the Present Study

The systematic review and meta-analysis have several limitations. First, the data were collected from studies with varying design and characteristics, also revealing moderate to high inconsistency based on high heterogeneity. Further, our study highlighted risks of reporting bias. Some of the studies included in the systematic review lacked the required information to be included in the meta-analysis (e.g., two arms, means and standard deviation values, and measurement points) but many more provided insufficient descriptions of the study design, sample, and procedure – all of which complicated the assessment of study quality and publication bias. Further, several of the studies included in the meta-analysis were based on a low sample size and thus reduced the statistical power. The lack of statistical significance in some of the findings is probably the result of a combination of small effect sizes and lack of statistical power due to the low number of studies, many of which included small samples. All these factors limited the extent to which conclusions can be drawn from this study regarding the evidenced effectiveness of interventions. However, in order to nuance the information on the evidence identified, as well as to test the robustness of the findings from the meta-analysis exercise, we performed several sub-group analyses. For example, the sensitivity analysis that included only high-quality studies showed a lower but still statistically significant pooled effect on overall work engagement. The reason behind a lowered pooled effect size estimate among the high-quality studies only compared to all included studies could be explained by an on average smaller difference between the intervention and control group in relation to the measured outcome, which in turn implies a slightly weakened relevant effect in practice among these studies. Not only does this call for more intervention studies applying high-quality research design and methods, but it also points out the need for a more nuanced examination of the mechanisms underlying the effectiveness of the studies aiming to promote work engagement.

The second limitation pertains to the categorizations of the included studies. While we did our best to classify the studies in a meaningful way that would further the understanding of how work engagement can be promoted, there is always a risk of mis-categorization due to inconsistency in how information is reported.

A third limitation is that we only included studies that measured work engagement using the UWES-scale (Schaufeli et al., 2006). Although this scale is widely used in the work engagement literature (Bailey et al., 2017; Shuck et al., 2017; Kelders et al., 2020), a recurring criticism concerns its robustness, which is argued to be weakened due to the three-factor structure (Wefald et al., 2012). At the same time, applying use of the UWES-scale as one of the eligibility criteria for this study could be viewed as a strength. One reason for this is that the validity and reliability of the UWES-scale are supported in several studies and in several settings (Schaufeli, 2014). It is also likely that an inclusion of the studies that we excluded on this basis would have aggravated the work with this systematic review and meta-analysis to the extent that the meaningfulness and robustness of the study results had been diminished.

Implications for Research and Practice

We provide researchers with a checklist that could be used when conducting future studies on bottom-up work engagement interventions (see **Table A1**). Future intervention research and practice can build upon the aggregated results of our systematic review and meta-analysis in at least three different ways. First, robustness of study findings should be ensured in future bottom-up intervention studies investigating the effect on work engagement. Here, ensuring robustness especially entails ensuring that the study sample is representative of the investigated population, the statistical power is sufficient, and a comparison group is included. Further, the participants should be allocated randomly, or baseline differences between the intervention and the comparison group should at least be controlled for. In the current study, only 12 of the included studies were rated with the highest quality score. For example, a statistically significant increase in work engagement was reported in a clear majority of the systematically reviewed job crafting interventions, while the aggregated results in our meta-analysis showed that this dominant category of intervention focus had no statistically significant effect on work engagement. Moreover, one third of the intervention studies that focused on the promotion of work engagement through job crafting was conducted by van Wingerden et al. (2016, 2017a,b,c) and the resemblance between these studies is high. It is our interpretation that these groundbreaking studies set the tone for most of the subsequent studies that shared this intervention focus, which illustrates the danger in relying on the results of single intervention studies, especially if they can be associated with methodological flaws and risk of bias. From a practical point of view, this learning is also relevant for practitioners, since it suggests that popular practice does not necessarily constitute best practice.

Second, more studies investigating the effects of bottom-up interventions on sub-components of work engagement are warranted. Such studies could deepen our understanding of how bottom-up interventions aimed at promoting sub-components of work engagement stand in comparison with those aimed at promoting overall work engagement. However, based on the synthesized evidence, practitioners are guided to educate, facilitate, and encourage individual bottom-up approaches that promote the overall work engagement of employees.

Third, the evidence retrieved from the meta-analysis suggests that future intervention research should apply universal approaches rather than tailored ones. In practice, these results can be interpreted to imply that similar training, methods, and techniques should be applied to all kinds of employees when organizations want to facilitate the process in which employees learn, practice, and eventually use bottom-up approaches for the development of workplace resources.

CONCLUSION

In conclusion, our results evidenced a small but promising intervention effect on overall work engagement. Furthermore, this systematic review and meta-analysis sheds light on the underlying mechanisms of bottom-up, resource-developing interventions that successfully promote work engagement. Based on our findings, we advocate the use of a universal approach and a focus on strengths use or mobilizing ego resources to increase intervention effectiveness. Scholars within the wide and interdisciplinary field of work engagement interventions can benefit from our checklist covering recommendations for future research endeavors to ensure increased evidence robustness and knowledge advances made.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, and further inquiries can be directed to the corresponding author.

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AUTHOR CONTRIBUTIONS

JMB formulated the aim of the study and the applied eligibility criteria, conducted database searches, screening and selection, coding, and quality assessment, synthesized the study data, prepared the published work, wrote the initial draft, revised and edited the manuscript, as well as acquired the financial support for the publication of this work. PB participated in the discussions around selection and coding of the retrieved data, in addition to contributing to the preparation of the published work, specifically with critical reviews and revisions of the various versions of the manuscript. AKF participated in the final selection of the included studies and related coding exercises, applied statistical techniques to analyze the study data, and contributed to the preparations of the published work, specifically with critical reviews and revisions of the various versions of the manuscript. All authors contributed to the article and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.730421/full#supplementary-material>

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APPENDIX

TABLE A1 | Checklist for future bottom-up intervention studies on work engagement.

Optimize the internal validity:

Aim for a feasible sample size

Include a control group – preferably apply a randomized controlled design

Report and control for baseline differences between the intervention and the control group

Report how well the sample characteristics matched the population characteristics

Report the dropout rate

Calculate the statistical power and report effect sizes

Report long-term effects of the intervention

If possible, include qualitative measures to answer the question of why and how the intervention worked/did not work and to explore potential unintended effects

Optimize the external validity:

Recruit participants from several organizations and occupational groups to increase generalizability

Use standardized and comparable instruments for primary and secondary outcomes

Contribute to under-researched topics:

Investigate intervention effects on the sub-components of work engagement

Study relevant sub-groups

Conduct interventions focused on self-management

Deliver interventions online

Ask the participants about their experiences of both the intervention design and outcomes

Conduct interventions in other contexts than health care

Conduct interventions based on samples from other continents than Europe

