

Routledge
Taylor & Francis Group

Early Education and Development

ISSN: 1040-9289 (Print) 1556-6935 (Online) Journal homepage: www.tandfonline.com/journals/heed20

Empowered, Strained, or Stable: Teachers' Experiences of Occupational Well-Being During the Two-Year Pre-Primary Education Trial in Finland

Heli Muhonen, Mimmu Sulkanen, Maarit Alasuutari & Marja-Kristiina Lerkkanen

To cite this article: Heli Muhonen, Mimmu Sulkanen, Maarit Alasuutari & Marja-Kristiina Lerkkanen (2025) Empowered, Strained, or Stable: Teachers' Experiences of Occupational Well-Being During the Two-Year Pre-Primary Education Trial in Finland, Early Education and Development, 36:2, 477-497, DOI: 10.1080/10409289.2024.2404823

To link to this article: https://doi.org/10.1080/10409289.2024.2404823

© 2024 The Author(s). Published with license by Taylor & Francis Group, LLC.

Published online: 18 Sep 2024.

Submit your article to this journal

Article views: 2090

View related articles

View Crossmark data

Citing articles: 3 View citing articles

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=heed20

EARLY EDUCATION AND DEVELOPMENT
2025, VOL. 36, NO. 2, 477–497
https://doi.org/10.1080/10409289.2024.2404823

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

Empowered, Strained, or Stable: Teachers' Experiences of Occupational Well-Being During the Two-Year Pre-Primary Education Trial in Finland

Heli Muhonen[a], Mimmu Sulkanen[a,b], Maarit Alasuutari[b], and Marja-Kristiina Lerkkanen[a]

[a]Department of Teacher Education, University of Jyväskylä; [b]Department of Education, University of Jyväskylä

ABSTRACT

Research Findings: This study investigated early childhood education and care (ECEC) teachers' experiences of occupational well-being during a two-year pre-primary education trial in Finland. Profile groups of the trial experimental group teachers ($n = 376$) were identified. We also examined whether the identified profiles differed with respect to different ECEC classroom and teacher professional characteristics. Through latent profile analysis, three profile groups of occupational well-being were identified among the ECEC teachers: *empowered* ($n = 34$), *strained* ($n = 138$), and *stable teachers* ($n = 200$). In the majority of the pre-primary groups of empowered teachers, children represented the same age group, whereas the age distribution varied more among the pre-primary groups of strained and stable teachers. Empowered teachers reported having more instructed activity sessions and distributing responsibility more among the personnel teams. Strained teachers reported having more individual responsibility for instructing group activities. *Practice or Policy:* Attention to ECEC teachers' occupational well-being should be paid in dynamic and changing circumstances of their work careers, such as the Finnish two-year pre-primary education trial. Nationally unitary and appropriate classroom resources should be guaranteed to support ECEC teachers' well-being both in trials and in their everyday work.

Introduction

Pre-primary education refers to the initial stage of organized instruction that is designed to introduce young children to a school-type environment, support their emerging academic and social skills, and provide a bridge between home and school (Leseman, 2009; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2021). Though their global standards vary, pre-primary education programs are typically designed for children three to five years of age, which is one to two years before they enter compulsory primary education (United Nations International Children's Emergency Fund [UNICEF], 2022). Finland is a country known as one of the educational leaders in the world, with children entering compulsory one-year pre-primary education in the year they turn six and primary school as late as seven years of age (Finnish National Agency for Education [EDUFI], 2017). However, in the fall of 2021, the Finnish Ministry of Education and Culture (2021) launched a two-year pre-primary education trial to develop equality and the quality of Finnish pre-primary education. The two-year pre-primary education program followed a new pilot curriculum according to which the experimental group children entered preschool at the age of five (Core Curriculum for Two-Year Pre-Primary Education Trial; EDUFI, 2021).

CONTACT Heli Muhonen heli.j.muhonen@jyu.fi Department of Teacher Education, University of Jyväskylä, P.O. Box 35, Jyväskylä 40014, Finland.

© 2024 The Author(s). Published with license by Taylor & Francis Group, LLC.
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

ECEC teachers play a central role in the practical implementation of the new curriculum of the two-year pre-primary education trial. In the context of their own work, the ECEC teachers have faced the challenge of how to interpret the new curriculum and implement the pre-primary education for the one-year younger age group of children for the first time. This type of significant work-related changes and challenges can support employees' work engagement (Bakker et al., 2012), but the changes can also have negative effects on their occupational well-being and work performance (Bordia et al., 2004; Maslach et al., 2001; Wisse & Sleebos, 2016). The occupational well-being research also highlights that teachers' occupational well-being is individually constructed, and that there are variations in how teachers experience diverse, both the positive and negative aspects of their occupational well-being (Hascher & Waber, 2021). Hence, in the present study, an exploratory person-centered study approach is applied to investigate ECEC teachers' individual experiences of their occupational well-being in the dynamic and changing circumstances of their work during the two-year pre-primary education trial in Finland.

The present study is among the very first attempts to investigate the implementation and effects of the Finnish two-year pre-primary education trial. First, using latent profile analysis (LPA), the profile groups of ECEC teachers were identified based on their experiences of occupational well-being during the trial. Second, it was examined whether the identified profiles differed with respect to various ECEC classroom characteristics and teacher professional characteristics.

Finnish Pre-Primary Education and the Two-Year Pre-Primary Education Trial

In Finland, all children under school age have a subjective right to ECEC. Children typically participate in mandatory one-year pre-primary education (as a part of ECEC) at the age of six, after which they continue to primary school at the age of seven. Pre-primary education is typically organized in groups of six-year-old children, whereas among ECEC groups of younger children, the age distribution may vary significantly. Participation in ECEC is subject to a fee that depends on family income and the number of children, but participation in pre-primary education is free of charge. Legislation (Government Decree on Early Childhood Education and Care 753/2018, 2018) states that there may be a maximum of seven 3–6-year-old children in the full-time care of each adult. Typically, a child group in an ECEC center has about 21 children and three staff members of whom 1–2 are qualified ECEC teachers with university- or polytechnic-level education and 1–2 educators with vocational training.

National core curricula (EDUFI, 2014, 2021, 2022) guide the implementation of ECEC and pre-primary education, but it is the municipalities that are responsible for arranging ECEC services and planning their own local curricula. In pre-primary education (EDUFI, 2014, 2021), the roles of interaction, collaboration, and transversal skills in preschool tasks and play are highlighted, and diverse content areas are integrated through thematic activities to support the development of children's social and emerging academic skills and motivation to learn. The goal of pre-primary education is to support children's social skills and learning through child-centered activities that provide them with opportunities to become excited and motivated to explore, solve, and learn new things. Pre-primary education for six-year-olds can be organized in ECEC centers or in schools (the trial has been organized only in ECEC centers) and is provided at least 700 hours per year, on average, four hours per day.

Starting August 2021, a two-year pre-primary education trial in Finland was launched by the Finnish Ministry of Education and Culture (2021). In total, approximately 35,000 children (experimental group $n \approx 15{,}000$, control group $n \approx 20{,}000$), their ECEC teachers, guardians, and communal ECEC leaders participated in the trial. The first cohort (children born in 2016) started the trial in the fall of 2021, and the second cohort in the fall of 2022 (children born in 2017). The trial curriculum (EDUFI, 2021) was strongly based on the National Core Curriculum for Pre-primary Education (EDUFI, 2014) for six-year-old children. In addition, the National Core Curriculum for ECEC (EDUFI, 2022) for 0–5-year-old children was consulted when planning this new curriculum. The

purpose of the trial was to enhance education equitability by encouraging more children to participate in free pre-primary education as part of ECEC. The trial aimed to: 1) examine and develop the quality and effectiveness of Finnish pre-primary education; 2) map the continuity of ECEC, pre-primary education, and initial teaching; 3) investigate the effects on children's development, learning, social skills, and self-esteem; and 4) examine the guardians' service choices (Finnish Ministry of Education and Culture, 2021). Through child-centered activities and play, the two-year pre-primary education program aimed to strengthen the children's ability to cooperate and learn emerging academic skills to build a solid foundation for moving to primary school. The children were given the opportunity to learn and explore at their own pace. A total of at least 1,400 hours of pre-primary education was provided over two years, with at least 700 hours in each year. Provisions on the trial were laid down in the Act on a Two-Year Pre-primary Education Trial 1046/2020 (2020). Concerning the practical changes, the trial ECEC teachers reported that the two-year pre-primary education was organized as more planned and goal-oriented function compared to the traditional ECEC for five-year-old children (Muhonen et al., 2024). They also reported that two-year pre-primary education had a stronger focus on practicing the emerging academic skills such as literacy and numeracy skills.

The evaluation project of the Finnish two-year pre-primary education trial investigates the implementation and the effects of the trial. In the present study, the trial implementation was investigated through the classroom characteristics and teacher professional characteristics, and the trial effect was examined concerning teachers' experiences of occupational well-being during the trial.

Teacher Occupational Well-Being

Based on their extensive review covering empirical studies over the past 20 years, Hascher and Waber (2021) conclude that there is no scientific consensus on the definition of teachers' occupational well-being. They state that though the definition and the operationalization of teachers' occupational well-being differ in prior empirical research and theoretical models, teachers' occupational well-being appears as a multidimensional phenomenon that includes diverse both positive and negative aspects. Broadly defined, occupational well-being describes the absence of the negative aspects (in the present study: workload, stress, and coping) and the presence of the positive experiences (in the present study: vigor, enthusiasm, absorption, meaningfulness, and motivation toward work) (Baldschun, 2015). Investigating and promoting teachers' occupational well-being is of great importance, since poor well-being lowers teachers' work performance, for instance, in the forms of lower professional and organizational commitment (Hakanen et al., 2006; Klassen & Chiu, 2011), lower quality of teacher – child interactions (Ansari et al., 2022; Sandilos et al., 2015), lower professional self-efficacy (Klassen & Chiu, 2011; Skaalvik & Skaalvik, 2010), and higher intention to leave the teaching profession (Høigaard et al., 2012; Klassen & Chiu, 2011; Schaack et al., 2020). On the other hand, high occupational well-being and engagement have been linked to teachers' better work performance due to more positive emotions and better psychological and physical health (Bakker & Demerouti, 2008).

The present study relies on the theoretical framework of the Job Demands-Resources (JD-R) model (e.g., Bakker et al., 2007; Demerouti et al., 2001), according to which the work-related demands and resources may evoke two different, albeit related occupational well-being processes: 1) a motivational process in which job resources foster teachers' engagement and lead to experiencing positive aspects of occupational well-being; and 2) an energetic process of wearing out in which high demands strain teachers' mental and physical resources and lead to experiencing negative aspects of occupational well-being (Hakanen et al., 2006; Schaufeli & Bakker, 2003). Hence, a balance between occupational demands and resources is important for teachers to be able to maintain positive occupational well-being and engagement (e.g., Hakanen et al., 2006; van Vegchel et al., 2005). On the other hand, high work demands and a lack of resources create the danger of increased burnout and reduced work engagement (Hakanen et al., 2006).

According to Schaufeli and Bakker (2003), teachers' work engagement refers to a work-related positive and fulfilling state of mind, including experiences of positive aspects such as vigor, dedication

(in the present study, referred to as enthusiasm), and absorption. Engaged employees have a sense of being effectively and energetically connected with their work and a sense of ability to deal with their work-related demands (Schaufeli et al., 2006). Compared with other occupations, teachers typically experience relatively high work engagement (Hakanen et al., 2006). Since it is typical for teachers to experience being highly engaged with their work, in the present study, the positive aspects of ECEC teachers' occupational well-being were examined in terms of the engagement-related characteristics of vigor, enthusiasm, absorption, meaningfulness, and motivation toward work. *Vigor* is characterized by the teacher's experience of high energy, mental resilience, high effort, and persistence when facing difficulties in work. Dedication describes teacher's *enthusiastic* and inspired involvement with their work along with feelings of significance and pride. *Absorption* refers to a teacher's fully concentrated and deeply engrossed state of mind in their work. Furthermore, the experience of *meaningfulness* of the work describes the degree to which people consider their work meaningful, valuable, and worthwhile (Hackman & Oldham, 1976; Steger et al., 2012). In terms of teacher *motivation*, Sinclair (2008) suggested a definition based on attraction, concentration, and retention of something that determines what attracts people to the teaching profession, how long they remain in the profession, and the extent to which they engage with their teaching. In the work of teachers, the abovementioned engagement-related characteristics have been shown to be linked to, for instance, teachers' higher work satisfaction (Perera et al., 2018), the use of diverse teaching practices (Addimando, 2019), relatedness with their students (Klassen et al., 2012), organizational commitment (Hakanen et al., 2006), and overall higher work performance (Bakker & Bal, 2010).

Based on the JD-R model (e.g., Bakker et al., 2007; Demerouti et al., 2001), when teachers experience an imbalance in terms of their work-related demands, control over the demands, and available resources, the situation has been shown to lead to a decrease in teachers' occupational well-being (Whitaker et al., 2015). In the present study, the negative-oriented aspects of ECEC teachers' occupational well-being were examined in terms of the amount of work, occupational stress, and coping. In prior research, excessive workload (along with time pressure) has been found to be one of the most significant aspects contributing to teachers' reduced occupational well-being and increased experience of stress (e.g., Kyriacou, 2001; Skaalvik & Skaalvik, 2015). Hence, teachers' occupational stress can be defined as the experience of unpleasant and negative emotions (such as anxiety, frustration, tension, restlessness, and nervousness) that originate from work as a teacher (Cumming, 2017; Elo et al., 2003; Kyriacou, 2001). Over the long term, the experience of stress can lead to burnout, which is defined as a type of prolonged occupational stress characterized by experiences of emotional exhaustion, cynicism, and a feeling of inadequacy (Maslach et al., 2001; Pyhältö et al., 2011).

On the other hand, teachers, and people in general, differ in their experiences of stress and how they cope with stressful situations (Lazarus & Folkman, 1984). Coping with stress refers to a person's continuous use of mental and physical actions to deal with agitating surroundings and the feelings evoked by these surroundings (Lazarus & Folkman, 1984). Teachers experiencing stress in their work environment develop strategies to resiliently cope with stressors (Howard & Johnson, 2004). Hence, although coping itself can be seen as a positive aspect that increases occupational well-being, initially, it is the demands and effort (not the resources and rewards) of the work that typically lead to teachers seeking coping strategies. Looking at the protecting effect of coping, prior studies have suggested a negative association between stress/burnout and coping: high coping can be reflected in teachers' low levels of stress, whereas low ability cope with work can be reflected in higher levels of stress/burnout (Eddy et al., 2019; Herman et al., 2018). On the other hand, due to the highly demanding and stressful nature of teaching occupation in general, it is possible for teachers to experience high levels of stress and still report adequate coping in their work (Brenner & Bartell, 1984).

Person-Centered Approach to Teacher Occupational Well-Being

Since teacher occupational well-being appears as such multidimensional construct, we cannot expect all teachers to experience both the positive and negative aspects of their occupational well-being the

same way. The limitation of the more traditional variable-centered approach is that it assumes population homogeneity and tends to therefore overlook the existence of naturally occurring subgroups within the population (Hofmans et al., 2020). Therefore, researchers have increasingly turned to person-centered methods to investigate subgroups of teachers exhibiting similar patterns of occupational well-being. Compared with the variable-centered approach, which focuses on the overall associations among variables, the person-centered approach enables researchers to identify groups of individual teachers showing different combinations (profiles) of values among study variables and comparing differences among the profile groups (Bergman & Andersson, 2010; Bergman et al., 2003).

During recent years, studies on different school levels have considered the relationship among different aspects of occupational well-being when investigating teacher profiles. These studies have shown that in the profile types, the balance between the positive and negative aspects varies, but typically, different types of lower, middle, and higher occupational well-being profiles are identifiable. Teacher occupational well-being profiles have been identified, for instance, in terms of experiences of stress and coping (Herman et al., 2018), stress and engagement (Pöysä et al., 2021), engagement and work-related effort and reward (Pöysä et al., 2022), and burnout and engagement (Salmela-Aro et al., 2019, 2020). In addition, some work has identified profiles based on teachers' experiences of motivation and different well-being and teacher professional characteristics (Collie & Martin, 2017), job satisfaction and stress (Huang et al., 2024), stress, emotional exhaustion, depressive symptoms and quality of teacher-child interactions (Penttinen et al., 2023), and job satisfaction, emotional exhaustion and classroom interactions (Virtanen et al., 2019).

In the present study, the Finnish two-year pre-primary education trial is considered a significant change in the ECEC teachers' work as they have had to follow the new curriculum for the first time to conduct pre-primary education already for five-year-old children. This type of significant changes can have both positive and negative effects on teachers' occupational well-being (e.g., Bakker et al., 2012; Bordia et al., 2004; Maslach et al., 2001; Wisse & Sleebos, 2016) that are likely to vary between and within individual teachers (Hascher & Waber, 2021). Hence, there is a need for person-centered research to capture profiles of how individual ECEC teachers experience their well-being during the Finnish two-year pre-primary education trial.

Classroom Characteristics, Teacher Professional Characteristics, and Occupational Well-Being

Building on the JD-R model (e.g., Bakker et al., 2007; Demerouti et al., 2001), classroom and teacher professional characteristics have been recognized as concrete work-related demands or resources that can either support or strain teachers' occupational well-being. In the present study, classroom characteristics of ECEC group size, number of children with support needs, and age distribution of the ECEC group are considered. Prior research has shown that the quality of ECEC working conditions has an impact on educators' occupational well-being (Bloom, 1988; Cumming, 2017), and a high-quality work environment has been shown to support ECEC teachers' higher job satisfaction and commitment (Schreyer & Krause, 2016). Working in a structured and organized environment enables ECEC teachers to provide higher quality support for children (Friedman-Krauss et al., 2014; Mashburn et al., 2008), whereas a crowded, disorganized, and noisy environment increases negative interactions between teachers and children (Buettner et al., 2016). Hence, size of the child group is often regarded as a stressor for teachers of different educational levels (e.g., Huang et al., 2022; Saloviita & Pakarinen, 2021), and larger group size is related to teachers' higher levels of burnout and exhaustion (French, 1993; Saloviita & Pakarinen, 2021; Travers & Cooper, 1996).

Increased variation within the child group (for instance, in terms of the age of the children and support needs) has been found to strain teachers' well-being. School teachers' experiences of stress and burnout have been shown to increase depending on the number of children requiring special support for their learning in the classroom (Saloviita & Pakarinen, 2021). In particular, pre-schoolers' externalizing behavior challenges have been found to predict ECEC teachers' experiences of stress

(Friedman-Krauss et al., 2014). In terms of the age of the children in the group, multi-age groups have been found to be beneficial for children's social and academic development in ECEC (e.g., Aina, 2001; Edwards et al., 2009), but the links found to teachers' experiences of their occupational well-being have varied. While some ECEC teachers have reported more concerns about educating multi-age groups of children (Aina, 2001), other teachers have experienced it as less stressful than educating children of the same age in a group (Cigala et al., 2019; Edwards et al., 2009).

Concerning teacher professional characteristics, variables of teaching experience, qualified personnel, instructed activity sessions, and distribution of responsibility within the personnel team were included in the present study. Prior research has shown diverse associations between teachers' occupational well-being, professional characteristics, and classroom practices. In terms of teachers' educational attainment and length of work experience, contradictory findings exist. Some prior studies have shown that ECEC teachers' educational attainment and length of work experience are linked positively with their job satisfaction and negatively with burnout (Bloom, 1988; Manlove, 1993). On the other hand, there is also research showing no link with work experience or ECEC teachers' educational level (e.g., Jeon et al., 2018), and there is even research showing evidence that novice teachers are likelier to experience burnout and leave the job within the first five years of their employment compared with their more experienced colleagues (Wells, 2015). In the work of Kwon et al. (2022), ECEC teachers with higher educational qualifications had greater resources available for their work and provided a higher quality of care; however, they also reported poorer occupational well-being than teachers with less education.

Furthermore, greater autonomy, supportive relationships (Hur et al., 2016; Whitaker et al., 2015), and collaboration with colleagues (Løvgren, 2016; Nislin et al., 2016) have been found to support ECEC teachers' regulation of stress and management of work demands. It has been shown that ECEC teachers who work well together and share responsibility as a team are more energized and able to manage work demands more efficiently (Nislin et al., 2016). At the same time, a lack of opportunities to collaborate has been found to be linked with educators' losing their commitment to ECEC practices and experiencing symptoms of burnout (Løvgren, 2016). On the other hand, in terms of the quality of ECEC teachers' teaching practices, teachers' higher work engagement has been shown to link positively with their higher quality of instructional support practices (Penttinen et al., 2020), whereas exhaustion and feelings of stress have been found to link negatively with observed emotional support, classroom organization, and instructional support (Hamre & Pianta, 2004; Penttinen et al., 2020; Sandilos et al., 2015).

In order to fully comprehend the ECEC teachers' occupational well-being during the Finnish two-year pre-primary education trial, these classroom and teacher professional characteristics should be considered as work-related demands and resources that can potentially contribute to how the individual teachers experience the positive and negative aspects of their occupational well-being. Especially in the context of the Finnish two-year pre-primary education trial, in which the municipalities, ECEC centers, and individual ECEC teachers have a great independence to organize their education, the demands and resources may vary significantly. Hence, there is a need to identify features related to the ECEC classrooms and teachers that may characterize the ECEC teachers' experiences of occupational well-being during the trial.

Aim of the Study

Both in Finland and globally, ECEC systems are constantly being developed to support the development of children, and at the same time, ECEC teachers are under growing pressure to meet the high and changing requirements (Stipek, 2006). Since the well-being and development of children is closely linked to the well-being of the teachers, it is evident that high-quality pre-primary education programs require healthy ECEC teachers (Hall-Kenyon et al., 2014). During the Finnish two-year pre-primary education trial, attention should be given to the investigation of how the changing situation may be reflected in ECEC teachers' occupational well-being. In the changing situation of the two-year pre-primary education trial, the work-

related demands and resources (JD-R model; Bakker et al., 2007; Demerouti et al., 2001) are likely to lead to changes in teachers' individual experiences concerning both positive and negative aspects of their occupational well-being. The varying aspects of the teachers' occupational well-being require a careful person-centered study approach that considers different classroom and teacher professional characteristics. Though the two-year pre-primary education trial was conducted as randomized controlled trial, it did not aim to influence on teachers' occupational well-being. Hence, despite the original trial nature, the nature of the present person-centered study is exploratory. The research questions were as follows:

RQ1: What kinds of profile groups can be identified based on the ECEC teachers' experiences of occupational well-being during the two-year pre-primary education trial?

RQ2: To what extent do the identified ECEC teachers' occupational well-being profiles differ in terms of various ECEC classroom characteristics (group size, children with support needs, age distribution of the ECEC group) and teacher professional characteristics (teaching experience, qualified personnel, instructed activity sessions, distribution of responsibility within the personnel team)?

Method

Participants

The present study is part of the evaluation project of the Finnish two-year pre-primary education trial (2021–2024) and focuses on the first trial cohort. The study was ethically evaluated and approved by the Aalto University's Research Ethics Committee prior to the data collection. Concerning the first cohort, the sampling of the experimental and control groups included 144 municipalities, 991 eligible ECEC centers, and approximately 1,842 ECEC groups (more information on the sampling, see Izadi et al., 2022; Sarvimäki et al., 2023). In the spring of 2022, an invitation to participate in an electronic Webropol survey was sent to the trial contact persons of the 144 municipalities selected for the two-year pre-primary education trial. The municipalities' contact persons were asked to forward the survey invitation to all the municipality's corresponding ECEC teachers in the experimental and control groups of the trial. One teacher per ECEC group (i.e. classroom; approximately 1,842 ECEC groups in total) was requested to complete the survey. Out of the total trial sample, 872 ECEC teachers (from 120 municipalities) answered the survey. Hence, the response rate remained relatively low, covering 47.3% of the total sample ECEC groups (from 83.3% of the participating municipalities) in the two-year pre-primary education trial. In the survey, the teachers were asked for information about their ECEC centers and the organization of the trial in them, groups of children, and the teachers' pedagogical beliefs, practices, and experiences regarding the two-year pre-primary education trial. The survey was conducted anonymously, and no identifiable information, such as the name, age, or gender of the teachers, was required.

Of the total sample pool, 376 teachers represented the experimental group, and 496 teachers represented the control group of the two-year pre-primary education trial. Since it was the trial experimental group teachers who conducted the two-year preprimary education, potential changes in their work-related demands and recourses, and hence, more change in their occupational well-being may be expected. Therefore, the present study focuses on investigating the experimental group ECEC teachers. Table 1 presents the descriptive background information concerning the experimental group.

Measures

Occupational Well-Being

ECEC teachers were asked to assess: "To what extent has the two-year pre-primary trial affected your experience of your work in terms of the following aspects: 1) amount of work, 2) occupational stress, 3)

Table 1. Descriptive background information of the experimental group teachers ($n = 376$).

	n	%
Occupational education		
University or polytechnic degree	343	91%
Vocational school degree	32	8.5%
No degree	2	0.5%
Teaching experience		
Less than one year	11	2.9%
1–5 years	57	15.1%
6–10 years	65	17.2%
11–15 years	51	13.5%
More than 15 years	193	51.2%
Qualified personnel in the ECEC group		
1–2 people	85	22.5%
3 people	232	61.5%
4 people	48	12.7%
5 people or more	12	3.2%
Number of children in the ECEC group		
1–13 children	56	14.9%
14–21 children	275	73.1%
More than 21 children	45	12%
Age of children in the ECEC group		
Children born only in 2016	123	32.7%
Children born in 2016 and later	141	37.5%
Children born in 2016 and earlier	83	22.1%
Children of diverse age groups	29	7.7%
Major regions in Finland		
Helsinki-Uusimaa	102	27.1%
Southern Finland	103	27.3%
Western Finland	74	19.6%
Northern and Eastern Finland	98	26.0%
Statistical grouping of municipalities		
Urban municipalities	244	64.7%
Semi-urban municipalities	67	17.8%
Rural municipalities	66	17.5%

p *< .05, ***< .001.

coping at work, 4) vigor at work, 5) enthusiasm toward work, 6) work absorption, 7) meaningfulness of work, and 8) work motivation." The teachers rated their occupational well-being in terms of eight items on a 5-step Likert scale (1 = decrease to a high extent, 2 = decrease to some extent, 3 = no change, 4 = increase to some extent, and 5 = increase to a high extent). The first three items measured the negative aspects of teachers' occupational well-being: amount of work (measure inspired by the Effort-Reward Imbalance [ERI] model; Siegrist et al., 2004), occupational stress (measure inspired by the one-item measure of Elo et al., 2003), and coping at work (measure inspired by the Teacher Stress and Coping Strategies Survey [SCSS]; Richards, 2012). The last five items measured the positive aspects of teachers' occupational well-being: vigor, enthusiasm, and absorption in respect to their work (measure inspired by the Utrecht Work Engagement Scale [UWES-9]; Schaufeli & Bakker, 2003; Seppälä et al., 2009), meaningfulness of work (measure inspired by the Work and Meaning Inventory [WAMI]; Steger et al., 2012), and work motivation (measure inspired by the Motivation at Work Scale [MAWS]; Gagné et al., 2010). Individual item mean scores were used for the analysis.

To validate the structure of the occupational well-being measure, aligning with prior research knowledge, exploratory factor analysis was conducted. The Kaiser–Meyer–Olkin measure verified the sampling adequacy for the analysis: KMO = .84. Bartlett's test of sphericity indicated that the correlation structure was adequate for factor analyses, χ^2 (28) = 2944.52, $p < .001$. The principal axis factoring with a cutoff point of .30 and the Kaiser's criterion of eigenvalues greater than 1 (see Field, 2009) yielded a two-factor solution as the best fit for the measure, accounting for 57.78% of the variance. The two factors were: 1) negative aspects of occupational well-being that included three items (amount of

work, stress, and coping, α = 0.66) and 2) positive aspects of occupational well-being that included five items (vigor, enthusiasm, absorption, meaningfulness, and work motivation α = 0.89). For the entire eight-item measure, both Cronbach's alpha and McDonald's omega were 0.84.

ECEC Classroom Characteristics

The teachers reported the number of children in their ECEC group, the number of children needing support (including intensified support, special support, or other types of support), and the age of the children in the group (which years the children were born). For the analysis, the age distribution of the ECEC group was categorized into four groups: children born only in 2016, children born in 2016 and later, children born in 2016 and earlier, and children of diverse age groups.

Teacher Professional Characteristics

The ECEC teachers reported their teaching experience on a scale from 1 to 5 (1 = less than one year, 2 = 1–5 years, 3 = 6–10 years, 4 = 11–15 years, 5 = more than 15 years), the number of personnel under different job titles in the group, and the average number of planned and instructed activity sessions (either instructed play or group sessions) that they organized for the five-year-old children in their group per week. For the analysis, the number of qualified personnel was merged into one variable including all personnel under different job titles except for assisting personnel (who are not officially required to have a degree in ECEC). The teachers also assessed the distribution of responsibility within their personnel team by means of a six-item measure that was developed for the teachers participating in the present trial. Teachers were asked to rate their answers on a continuous scale from 1 (responsibility is distributed among the whole team) to 10 (only the reporting ECEC teacher has responsibility), depending on the situation in their team. The six items measured the distribution of responsibility within the personnel team regarding: 1) planning group activities, 2) instructing group activities, 3) observing group activities, 4) assessing group activities, 5) developing group activities, and 6) overall pedagogy. Both Cronbach's alpha and McDonald's omega were 0.84 for the six-item measure.

Data Analysis

First, a person-centered approach with LPA (Lubke & Muthén, 2005; Vermunt & Magidson, 2002) was utilized to identify profiles of the experimental group ECEC teachers, based on the mean scores of the eight variables of occupational well-being. LPA is a model-based variant of traditional cluster analysis that aims to identify latent groups that describe the associations among different continuous variables (Vermunt & Magidson, 2002). A series of LPAs was executed to explore profile solutions that differed regarding the number of profiles. The following fit indices were used to identify the best-fitting profile solution: log likelihood (logL), Akaike's information criterion (AIC), Bayesian information criterion (BIC), adjusted Bayesian information criterion (ABIC), entropy, Vuong–Lo–Mendell–Rubin test (VLMR), Lo–Mendell–Rubin test (LMR), and parametric bootstrapped likelihood ratio test (BLRT). Good fit of the model is typically indicated by low logL, AIC, BIC, and ABIC values, and an entropy value close to 1 indicates distinct group solutions. Statistically significant p-values of VLMR, LMR, and BLRT indicate that the current number of groups is better than the previous solution with one less group (e.g., Lo et al., 2001; Nylund et al., 2007). Along with the statistical criteria, we also evaluated whether the profile solutions were practical (the number of teachers in each group was sufficient for further analysis and generalizable for a larger population) and theoretically reasonable. The LPAs were performed with the Mplus statistical package (version 7.4; Muthén & Muthén, 1998–2017).

Second, one-way analyses of variations (ANOVAs) and post hoc pairwise comparisons (with Bonferroni correction) were conducted to validate the chosen profile solution in terms of the eight criterion variables of occupational well-being. A similar analysis was also used to examine differences between the

identified profiles in terms of diverse ECEC classroom characteristics and teacher professional characteristics. Age distribution of the ECEC group was investigated with the Pearson chi-square test among the identified profiles. The analyses were performed using IBM SPSS Statistics 28.

The dataset included 0–1.6% missing values. Little's (1988) missing completely at random (MCAR) test showed that the data were missing completely at random, χ^2 (193) = 155.948, p = .977. Pairwise deletion was used to deal with the missing data.

Results

ECEC Teachers' Profiles of Occupational Well-Being

The trial experimental group ECEC teachers' (n = 376) experiences of occupational well-being during the two-year pre-primary education trial were investigated in terms of amount of work (M = 4.26, SD = 0.67), stress (M = 3.81, SD = 0.81), coping (M = 2.98, SD = 0.85), vigor (M = 3.45, SD = 0.86), enthusiasm (M = 3.73, SD = 0.87), absorption (M = 3.51, SD = 0.85), meaningfulness (M = 3.86, SD = 0.88), and motivation (M = 3.69, SD = 0.97).

The first research question aimed to explore what types of profile groups could be identified based on the ECEC teachers' experiences of occupational well-being during the two-year pre-primary education trial. The LPA goodness-of-fit indices demonstrated that the logL, AIC, and ABIC decreased when the number of profiles increased without providing a point of elbowing (Table 2). The entropy value showed an ideal fit for the three- and four-profile solutions (value 1.000), indicating clear classification. However, for the four-profile solution, the best log likelihood value could not be replicated (despite the increase in starting values), and therefore, the solution may not be trustworthy due to local maxima. The BLRT p-value was significant for all the profile solutions, whereas the p-values for both the VLMR and LMR tests suggested no statistical significance for either of the profile solutions. Moreover, profile solutions five and six included very small groups with only three or four teachers, which may be weakly generalizable to a larger population. To conclude, the profile solution was not clear in terms of varying goodness-of-fit indices. Nevertheless, the three-profile solution was determined to provide the most optimal fit with the data, as it indicated an ideal entropy value, statistically significant BLRT p-value, better VLMR and LMR values than the four-and five-profile solutions, and reasonable group sizes, and it was also theoretically and practically rational.

In the three-profile solution (Table 3 and Figure 1), the first profile group comprised 9.1% (n = 34) of the ECEC teachers. Teachers in this profile group were found to have the lowest levels of work and stress. In addition, they reported the highest levels of coping, vigor, enthusiasm, absorption, meaningfulness, and work motivation. Thus, profile group 1 was named *empowered teachers*. The second profile group comprised 37.1% (n = 138) of the ECEC teachers. Profile group 2 ECEC teachers reported the highest levels of the amount of work and stress. Furthermore, they reported the lowest levels of coping, vigor, enthusiasm, absorption, meaningfulness, and work motivation. Therefore, profile group 2 was named *strained teachers*. The third profile group applied to 53.8% (n = 200) of the ECEC teachers. Teachers in this profile group were found to report the average levels in terms of the variables of occupational well-being. On average, they experienced an increase in the amount of work

Table 2. Goodness-of-fit statistics and group sizes for the estimated unconditional latent profiles.

No. of Profiles	logL	AIC	BIC	ABIC	Entropy	VLMR	LMR	BLRT	Group sizes
2	−2880.422	5866.844	6074.545	5906.393	0.983	0.2644	0.2706	0.0000	10/362
3	**−2666.867**	**5457.734**	**5700.706**	**5503.999**	**1.000**	**0.7087**	**0.7108**	**0.0000**	**34/138/200**
4	−2275.098	4692.197	4970.438	4745.177	1.000	0.8379	0.8403	0.0000	29/138/5/200
5	−2214.355	4588.711	4902.222	4648.407	0.999	0.8200	0.8221	0.0000	22/193/106/4/47
6	−2200.068	4578.136	4926.918	4644.548	0.998	0.1028	0.1067	0.0500	4/3/193/22/106/44

logL = log likelihood, AIC = Akaike's information criterion, BIC = Bayesian information criterion, ABIC = adjusted Bayesian information criterion, VLMR = Vuong-Lo-Mendell-Rubin test, p-value; LMR = Lo-Mendell-Rubin test, p-value; BLTR = parametric bootstrapped likelihood ratio test, p-value.

Table 3. Profile means, standard deviations and their comparisons for the investigated variables.

	Profile 1 Empowered teachers ($n = 34$)	Profile 2 Strained teachers ($n = 138$)	Profile 3 Stable teachers ($n = 200$)				
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*F*	*p*	Effect size η^2	Post hoc test
Occupational well-being[a]							
Amount of work	2.82 (0.465)	4.99 (0.085)	4.00 (0.100)	2902.781	.000***	.940	1 < 2,3; 2 > 3
Stress	3.00 (0.935)	4.36 (0.661)	3.56 (0.623)	84.944	.000***	.316	1 < 2,3; 2 > 3
Coping	3.70 (0.847)	2.66 (0.892)	3.22 (0.671)	28.609	.000***	.135	1 > 2,3; 2 < 3
Vigor	3.70 (0.883)	3.33 (0.889)	3.52 (0.744)	3.765	.024*	.020	ns.
Enthusiasm	4.21 (0.820)	3.60 (0.859)	3.77 (0.788)	7.631	.000***	.040	1 > 2,3
Absorption	3.70 (0.810)	3.48 (0.821)	3.56 (0.775)	1.136	.322	.006	ns.
Meaningfulness	4.18 (0.769)	3.83 (0.904)	3.87 (0.794)	2.418	.091†	.013	ns.
Motivation	4.28 (0.729)	3.49 (0.983)	3.76 (0.915)	10.401	.000***	.054	1 > 2,3; 2 < 3
Classroom characteristics							
Group size	17.32 (4.066)	18.10 (3.561)	18.10 (4.149)	0.946	.389	.005	ns.
Children with support needs	3.09 (2.021)	3.70 (2.906)	3.32 (2.679)	1.106	.332	.006	ns.
Teacher professional characteristics							
Teaching experience[b]	3.91 (1.443)	3.93 (1.238)	3.97 (1.224)	0.064	.938	.000	ns.
Qualified personnel	2.82 (0.673)	3.00 (0.745)	3.01 (1.228)	0.489	.614	.003	ns.
Instructed activity sessions per week	10.03 (6.167)	7.27 (5.669)	7.38 (3.721)	4.904	.008**	.026	1 > 2,3
Distribution of responsibility within the personnel team regarding:[c]							
planning group activities	6.82 (3.040)	7.43 (2.710	6.91 (2.899)	1.521	.220	.003	ns.
instructing group activities	4.65 (2.784)	5.20 (3.141)	4.26 (3.112)	3.113	.025*	.020	2 > 3
observing group activities	3.47 (2.777)	4.09 (3.149)	3.40 (2.935)	2.917	.113	.012	ns.
assessing group activities	4.26 (3.078)	5.81 (3.145)	4.95 (3.353)	4.379	.013*	.023	1 < 2
developing group activities	4.74 (3.241)	6.12 (3.184)	5.53 (3.367)	2.870	.058†	.015	ns.
overall pedagogy	7.18 (3.316)	7.52 (3.123)	7.61 (2.997)	0.930	.396	.005	ns.

p †< .10, *< .05, **< .01, ***< .001, [a] variables of occupational well-being range from 1 (decrease to high extent) to 5 (increase to high extent), [b]teaching experience range from 1 (less than 1 year) to 5 (more than 15 years), and [c]distribution of responsibility range from 1 (responsibility among whole team) to 10 (responsibility only on the group teacher/teachers).

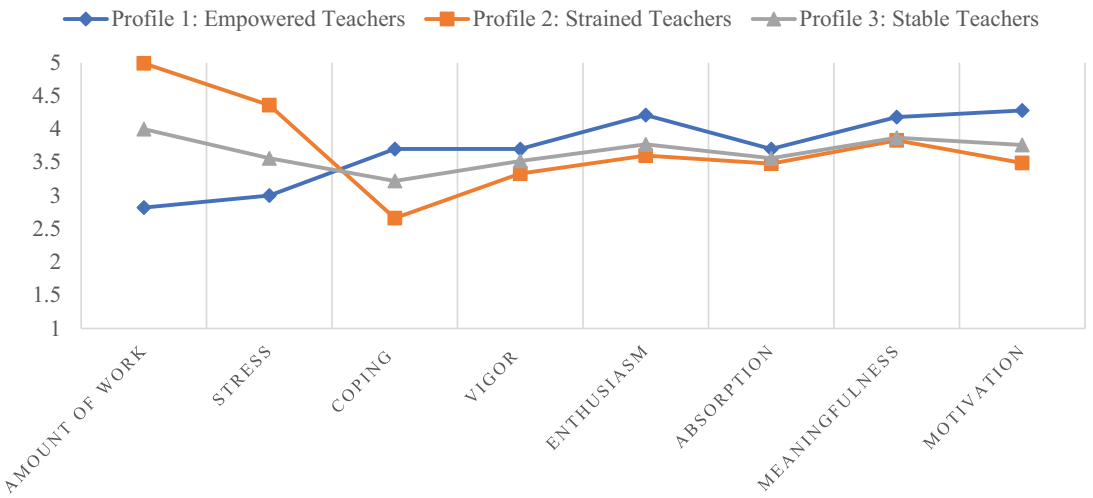

Figure 1. The Three-Profile Groups Based on ECEC teachers' experiences of occupational well-being during the two-year pre-primary education trial.

($M = 4.00$) and a slight increase or no change in terms of stress, coping, vigor, enthusiasm, absorption, meaningfulness, and work motivation. Thus, profile group 3 was named *stable teachers*.

The three-profile solution was validated with one-way ANOVAs and with post hoc tests (with Bonferroni correction) in terms of the eight occupational well-being variables on which the LPA was based (Table 3). The results suggested that all three profiles differed from each other in all variables representing negative aspects of occupational well-being: amount of work, stress, and coping. In terms of positive aspects of occupational well-being, the three profiles differed from each other in the variables of vigor, enthusiasm, and motivation. The findings of the post hoc tests complemented this by suggesting that the profiles had their own unique features when compared pairwise with the other profile groups. In terms of meaningfulness, the differences among the three profiles were marginally statistically significant, and for absorption, no statistically significant differences were found among the profiles.

Profile Group Differences Regarding ECEC Classroom Characteristics and Teacher Professional Characteristics

The second research question examined whether the three identified ECEC teachers' occupational well-being profiles differed according to diverse classroom characteristics and teacher professional characteristics. Age distribution of the ECEC group was investigated with the Pearson chi-square test among the three profiles. As can be seen by the frequencies cross-tabulated in Table 4, the three

Table 4. Age distribution of the ECEC group among the three teacher profiles of occupational well-being.

	Teacher profiles			
Age distribution of the ECEC group	Profile 1 Empowered Teachers ($n = 34$, 100%)	Profile 2 Strained Teachers ($n = 138$, 100%)	Profile 3 Stable Teachers ($n = 200$, 100%)	Significance/ Effect Size Phi φ
Children born only in 2016	20 (58.8%)	41 (29.7%)	61 (30.7%)	$x^2 = 20.740$, $p = .002$**/ .23
Children born in 2016 and later	5 (14.7%)	64 (46.4%)	69 (34.7%)	
Children born in 2016 and earlier	8 (23.5%)	26 (18.8%)	49 (24.6%)	
Children of diverse age groups	1 (2.9%)	7 (5.1%)	20 (10.1%)	

p *< .05, **< .01, ***< .001.

profiles differed statistically significantly in terms of the age of the children in their groups. In the majority of the pre-primary groups of empowered teachers, children represented the same age groups and were all born in 2016 (58.8%). In 46.4% of the preschool groups of the strained teachers, children were born in 2016 and later. Among the stable teachers, the greatest distribution regarding the age of the children in the ECEC group was found. In addition, one-way ANOVAs and post hoc tests (with Bonferroni correction) showed no statistically significant differences among the profiles in terms of the classroom characteristics of group size and the number of children with support needs in the group (Table 3).

In terms of teachers' professional characteristics, the one-way ANOVAs and post hoc tests showed that the three profiles differed from each other regarding the number of instructed activity sessions per week (Table 3). Empowered teachers reported having more instructed activity sessions for children than the strained and stable teachers. The three profiles also differed from each other in terms of the distribution of responsibility within the personnel team regarding instructing group activities and assessing group activities. Strained teachers reported having more individual responsibility for instructing group activities than stable teachers. Compared with strained teachers, empowered teachers reported distributing responsibility more among the personnel teams when assessing group activities. There were also marginally significant differences among the profiles in terms of distributing responsibility among the personnel teams for developing group activities. In terms of distributing responsibility among the personnel team for planning and observing group activities and for overall pedagogy, no differences among the three profiles were found. Furthermore, there were no statistically significant differences among the profiles in terms of ECEC teachers' teaching experience and the number of qualified personnel in the group.

Discussion

The present study investigated the experimental group ECEC teachers' experiences of occupational well-being during the two-year pre-primary education trial in Finland. Through LPA, three profile groups of occupational well-being were identified: empowered teachers, strained teachers, and stable teachers. It was found that the three profiles differed from each other with respect to the age of the children in the groups, number of instructed activity sessions per week, and distribution of responsibility within the personnel team.

The first research question aimed to determine what types of profile groups of occupational well-being could be identified among the ECEC teachers. The person-centered approach and LPA enabled the identification of three homogeneous profile groups within the ECEC teacher population (Bauer & Curran, 2004), which indicates varying experiences of the teachers participating to the two-year pre-primary education trial. The three profile groups of empowered, strained, and stable teachers differed from each other in terms of the quality of experienced occupational well-being as well as the size of the groups. In the three identified profiles, the clearest differences were seen regarding the negative aspects of occupational well-being, whereas the experiences concerning the positive aspects of occupational well-being were somewhat more even. Prior research has shown that despite the many challenges in their everyday work, teachers often experience their work as satisfying and rewarding (Bakker et al., 2007; Skaalvik & Skaalvik, 2015), and they typically experience relatively high work engagement (Hakanen et al., 2006), which is also reflected in the profiles found in the present study. Since the feeling of engagement has been linked to teachers' higher work performance (Bakker & Demerouti, 2008), it may be suggested that despite the change in demands and negative aspects of their occupational well-being during the trial, stable work-related engagement is likely to support the ECEC teachers' work performance in each profile group. Also, the protecting effect of coping in the changing work situation may have played a significant role in teachers experiences of their occupational well-being. The three profiles varied in terms the relation between coping and the other negative aspects of occupational well-being. The findings support prior research knowledge suggesting that high coping can be reflected in teachers' low levels of stress (such as the empowered teachers), whereas low coping

may not protect teachers from the demands of their work and, therefore, may be reflected in teachers' lower occupational well-being (such as the strained teachers) (Eddy et al., 2019; Herman et al., 2018).

The group of empowered teachers ($n = 34$) can be considered somewhat exceptional, since they were the smallest group experiencing increased work engagement and coping, and the lowest levels of workload and stress. These teachers reported predominantly positive changes in their occupational well-being during the trial; therefore, this can be seen to represent an ideal balance between the occupational demands and resources (see Hakanen et al., 2006; van Vegchel et al., 2005). However, it should be noted that the group of empowered teachers was relatively small when compared with the entire sample pool of experimental group teachers, which may indicate that experiencing this ideal work engagement may be unusual for ECEC teachers.

On the other hand, experiencing an imbalance among work-related demands, control over the demands, and available support has been shown to lead to teachers' decreased occupational well-being (Whitaker et al., 2015), especially experiences of extended work-related stress (Unterbrink et al., 2007; Wang et al., 2015). This imbalance was evident in the group of strained teachers ($n = 138$) who experienced the highest increase in workload and stress, along with reduced coping and the lowest work engagement. The strained teachers comprised approximately one-third of the experimental group teachers, which indicated a potential area of serious concern: a significant proportion of the experimental group teachers experienced the demands and effort of their work as overpowering the reward during the two-year preschool trial. Nevertheless, stable teachers ($n = 200$) were the largest identified group, comprising more than half of the experimental group teachers. They experienced an increase in workload and no change in coping, but also a slight increase in terms of the aspects of work engagement. These teachers can be seen to represent the prevailing state of the teaching profession in which both the negative and positive aspects of occupational well-being exist simultaneously: teachers experience their work as demanding but rewarding at the same time (Johnson et al., 2005; Kyriacou, 2001).

Since different classroom and teacher professional characteristics have been recognized as work-related demands or resources that can either support or strain teachers' occupational well-being (JD-R model; Bakker et al., 2007; Demerouti et al., 2001), the second research question investigated the extent to which the identified ECEC teachers' occupational well-being profiles differed in terms of the specific ECEC classroom characteristics and teacher professional characteristics. Concerning classroom characteristics, the three profiles differed from each other in terms of the age of the children in their groups. In prior research, multi-age ECEC groups have been suggested as beneficial for children's social and academic development (e.g., Aina, 2001; Edwards et al., 2009), but the links between teachers' occupational well-being and age distribution of the child group have varied: some ECEC teachers have experienced more concerns when educating multi-age groups (Aina, 2001), whereas others have experienced educating multi-age groups as less stressful than children of the same age (Cigala et al., 2019; Edwards et al., 2009). In the present study, the pre-primary groups of the empowered teachers were characterized with children of the same age (five-year-old children), whereas within the strained and stable teachers, there was more variation in the age of the children. Targeting pre-primary education only for children of the same age (here, five-year-old children) may be more practical and less stressful for the teachers in the unique situation of the Finnish two-year pre-primary trial in which the teachers are still learning ways to instruct children according to the new curriculum guidelines. However, from a broader perspective, based on the study findings, it is not possible to draw conclusions regarding the link between the ECEC teachers' well-being and groups of the same-aged children.

In terms of the teachers' professional characteristics, the empowered teachers reported more instructed activity sessions per week and more distribution of responsibility within the personnel team. In prior research, distribution of responsibility and collaboration with colleagues have been shown to support ECEC teachers' regulation of stress and management of work demands (Løvgren, 2016; Nislin et al., 2016). The distribution of responsibility can be seen as a resource that may

positively contribute to the higher quality of ECEC teachers' occupational well-being, which, again, has been shown to further support their higher instructional practices (e.g., Penttinen et al., 2020). Hence, the empowered teachers' higher work commitment and quality may be manifested in a higher number of instructed activity sessions that are organized for the children. On the other hand, the strained teachers reported having more individual responsibility for instructing group activities. This finding supports prior literature that has shown that educators' lower resources for collaboration are linked with their lower work commitment and burnout (Løvgren, 2016). Especially in the Finnish ECEC context, in which the role of interprofessional teamwork among educators has long roots (Karila & Nummenmaa, 2001), lack of teamwork or otherwise unfunctioning collaboration may cause strain for the educators.

Regarding the other investigated teacher professional and classroom characteristics, there were no statistically significant differences among the profiles in terms of group size, the number of children with support needs in the group, and the number of qualified personnel in the group. This may be due to somewhat little variation in the ECEC groups since, in Finland, the child-adult ratio in ECEC is regulated by law (Act on Early Childhood Education and Care 540/2018, 2018). In ECEC groups, there should not be more than seven children aged over three per one adult (Government Decree on Early Childhood Education and Care 753/2018, 2018). The ratio applies to children who spend more than five hours a day in ECEC. Also, the number of children in the ECEC group cannot exceed the number of children allowed for three adults. Children with special support needs should be considered in the child-adult ratio of the ECEC group. In addition, the three profiles did not differ in terms of ECEC teachers' teaching experience. In the light of prior research, this finding should not be considered surprising, since there is no clear consensus concerning the link between teachers' work experience and occupational well-being (see e.g., Bloom, 1988; Jeon et al., 2018; Manlove, 1993; Wells, 2015).

Implications, Future Directions, and Limitations

In the international context, the study findings align with prior research suggesting that teachers' occupational well-being is individually constructed and there are different types of lower, middle, and higher occupational well-being profiles identifiable that show variation among the positive and negative aspects (e.g., Collie & Martin, 2017; Herman et al., 2018; Huang et al., 2024; Pöysä et al., 2021, 2022; Salmela-Aro et al., 2019, 2020). However, what makes the present study stand out from the prior literature are the contexts of pre-primary education and work-related change. It is important to acknowledge that prior person-centered occupational well-being research have predominantly focused on teachers of older students. Adding to the limited person-centered occupational well-being research conducted in the context of pre-primary education (e.g., Penttinen et al., 2023), the present study is among the first to identify well-being profiles of ECEC teachers that have just experienced a significant change in their work. In future research, a stronger person-centered approach applied to large datasets in ECEC is needed to further investigate how to support the well-being of ECEC teachers of different profiles. The findings indicate that the majority of the ECEC teachers (stable teachers) balanced between the negative and positive aspects of their occupational well-being. Still, research is needed on how to prevent negative aspects in any type of dynamic and changing circumstances of ECEC teachers' work careers.

In the Finnish context, the study findings provide evidence-based information about the state of ECEC teachers' occupational well-being when conducting two-year pre-primary education for the first time. The findings should be considered by educational policymakers when further developing, formulating, and implementing the Finnish pre-primary educational system. Since higher teacher occupational well-being links with their high-quality instruction (e.g., Addimando, 2019; Bakker & Bal, 2010; Hakanen et al., 2006), attention to ECEC teachers' occupational well-being should be paid, especially if the two-year pre-primary education is to be included as a permanent part of the Finnish educational system. In Finland, municipalities, ECEC centers, and individual ECEC teachers have the autonomy to organize their function. This creates a challenge to guarantee nationally unitary and

appropriate classroom resources to support ECEC teachers who deal with the high demands of their work when providing pre-primary education for children as young as five years of age. For instance, collaboration, and the distribution of responsibility among educators should be promoted to support their occupational well-being, especially when facing significant changes in their work. Furthermore, the age distribution of the children in the pre-primary education groups should be considered. Paying attention to these diverse classroom and teacher professional characteristics does not only support ECEC teachers' occupational well-being but enhances the structural and process quality of the pre-primary education (Early et al., 2007; Melhuish et al., 2015).

The present study was not without limitations. First, the study did not have a longitudinal design. Hence, caution is needed before making causal inferences. Second, the measures of teachers' occupational well-being were adapted from their original measures, since there was a need to condense the survey that covered broadly different aspects of the trial. Hence, the eight-item measure did not thoroughly assess teachers' occupational well-being, but it did nevertheless provide an overall assessment of teachers' experiences. In addition, some of the measures of teachers' professional characteristics were developed specifically for the two-year pre-primary trial and were therefore used for the first time. Hence, it is important to test the measures in other studies to validate them and gain more experience in their applicability. Third, since it was the municipalities that conducted the local implementation of the trial, there could have been variations among the municipalities and ECEC centers regarding the introduction schedule and management practices of the trial. It is possible that inconsistencies and limitations in the introduction scheduling could have affected teachers' perspectives on their experiences of well-being; this potential link should be investigated in future research. Furthermore, it is vital to acknowledge that the broader social context (including various social, cultural, economic, and political factors) could have contributed to the teachers' well-being. Most importantly, the trial was conducted in 2021–2022, while the COVID-19 pandemic was still ongoing, which may have caused excessive and varying strain for the teachers, the ECEC centers, and the municipalities. Fourth, the sex and age of the investigated ECEC teachers were not considered in the present study though, in prior research, they have been considered as important control variables linking with diverse teacher-related factors. Hence, teacher sex and age should be taken into consideration in future research. Finally, the response rate to the teacher survey remained relatively low, comprising 47.3% of the total sample ECEC groups of the two-year pre-primary education trial. Although the teacher responses were available from 83.3% of the participating municipalities, the low response rate should be considered when generalizing the results to the whole sample of the Finnish two-year pre-primary education trial.

Conclusions

To conclude, the present study contributes to the prior scant person-centered research on ECEC teachers' occupational well-being. Despite the specific trial context, the identified occupational well-being profiles can be applicable to other types of dynamic and changing circumstances of ECEC teachers' work careers. The profiles support prior knowledge showing that well-being is individually constructed and there are variations how teachers may experience the different positive and negative aspects. In the Finnish context, the findings are of great importance to education professionals and policymakers because they provide a first glance at how the two-year pre-primary education trial may be associated with the ECEC teachers' occupational well-being. The three identified teacher profile groups indicate that there were variations among the trial experimental group ECEC teachers' experiences, but the majority of the teachers were identified as stable teachers who experienced balance between their workload and levels of stress and the various aspects of work engagement. Since different classroom characteristics and teacher professional characteristics can contribute to the quality of teachers' occupational well-being, appropriate resources should be provided for ECEC teachers to support their well-being both in trials and in their everyday work.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Funding

The study was funded by the Finnish Ministry of Education and Culture [VN/11248/2021]. The first author was supported by grants from the Emil Aaltonen Foundation [No. 220139 and No. 230127]. The study is part of 1) Education for the Future EDUCA Flagship funded by the Research Council of Finland [No. 358924 for 2024 –2028], and 2) the project Right to Belong: Tackling Loneliness and Ostracism during Childhood and Youth funded by the Strategic Research Council established within the Research Council of Finland [No. 353392, No. 352648 for 2022–2025].

References

Act on a Two-Year Pre-primary Education Trial [Laki kaksivuotisen esiopetuksen kokeilusta] 1046/2020. (2020). https://www.finlex.fi/fi/laki/alkup/2020/20201046

Act on Early Childhood Education and Care [Varhaiskasvatuslaki] 540/2018. (2018). https://www.finlex.fi/fi/laki/alkup/2018/20180540

Addimando, L. (2019). The effect of positive working conditions on work engagement and teaching classroom practices: A large cross-sectional study in Switzerland. *Frontiers in Psychology*, *10*, 2129. https://doi.org/10.3389/fpsyg.2019.02129

Aina, O. E. (2001). Maximizing learning in early childhood multiage classrooms: Child, teacher, and parent perceptions. *Early Childhood Education Journal*, *28*(4), 219–224. https://doi.org/10.1023/A:1009590724987

Ansari, A., Pianta, R. C., Whittaker, J. V., Vitiello, V. E., & Ruzek, E. A. (2022). Preschool teachers' emotional exhaustion in relation to classroom instruction and teacher-child interactions. *Early Education & Development*, *33*(1), 107–120. https://doi.org/10.1080/10409289.2020.1848301

Bakker, A. B., & Bal, P. M. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational & Organizational Psychology*, *83*(1), 189–206. https://doi.org/10.1348/096317909X402596

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13*(3), 209–223. https://doi.org/10.1108/13620430810870476

Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, *99*(2), 274–284. https://doi.org/10.1037/0022-0663.99.2.274

Bakker, A. B., Tims, M., & Derks, D. (2012). Proactive personality and job performance: The role of job crafting and work engagement. *Human Relations*, *65*(10), 1359–1378. https://doi.org/10.1177/0018726712453471

Baldschun, A. (2015). The six dimensions of child welfare employees' occupational well-being. *Nordic Journal of Working Life Studies*, *4*(4), 69–87. https://doi.org/10.19154/njwls.v4i4.4708

Bauer, D. J., & Curran, P. J. (2004). The integration of continuous and discrete latent variable models: Potential problems and promising opportunities. *Psychological Methods*, *9*(1), 3–29. https://doi.org/10.1037/1082-989X.9.1.3

Bergman, L. R., & Andersson, H. (2010). The person and the variable in developmental psychology. *Zeitschrift für Psychologie/Journal of Psychology*, *218*(3), 155–165. https://doi.org/10.1027/0044-3409/a000025

Bergman, L. R., Magnusson, D., & El-Khouri, B. M. (2003). *Studying individual development in an interindividual context: A person-oriented approach*. Lawrence Erlbaum Associates Publishers.

Bloom, P. J. (1988). Factors influencing overall job satisfaction and organizational commitment in early childhood work environments. *Journal of Research in Childhood Education*, *3*(2), 107–122. https://doi.org/10.1080/02568548809594933

Bordia, P., Hobman, E., Jones, E., Gallois, C., & Callan, V. J. (2004). Uncertainty during organizational change: Types, consequences and management strategies. *Journal of Business & Psychology*, *18*(4), 507–532. https://doi.org/10.1023/B:JOBU.0000028449.99127.f7

Brenner, S. O., & Bartell, R. (1984). The teacher stress process: A cross-cultural analysis. *Journal of Organizational Behavior*, *5*(3), 183–195. https://doi.org/10.1002/JOB.4030050303

Buettner, C. K., Jeon, L., Hur, E., & Garcia, R. E. (2016). Teachers' social–emotional capacity: Factors associated with teachers' responsiveness and professional commitment. *Early Education & Development*, *27*(7), 1018–1039. https://doi.org/10.1080/10409289.2016.1168227

Cigala, A., Venturelli, E., & Bassetti, M. (2019). Reflective practice: A method to improve teachers' well-being. A longitudinal training in early childhood education and care centers. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.02574

Collie, R. J., & Martin, A. J. (2017). Adaptive and maladaptive work-related motivation among teachers: A person-centered examination and links with well-being. *Teaching & Teacher Education*, *64*, 199–210. https://doi.org/10.1016/j.tate.2017.02.010

Cumming, T. (2017). Early childhood educators' well-being: An updated review of the literature. *Early Childhood Education Journal*, *45*(5), 583–593. https://doi.org/10.1007/s10643-016-0818-6

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Early, D. M., Maxwell, K. L., Burchinal, M., Alva, S., Bender, R. H., Bryant, D., Cai, K., Clifford, R. M., Ebanks, C., Griffin, J. A., Henry, G. T., Howes, C., Iriondo-Perez, J., Jeon, H. J., Mashburn, A. J., Peisner-Feinberg, E., Pianta, R. C., Vandergrift, N., & Zill, N. (2007). Teachers' education, classroom quality, and young children's academic skills: Results from seven studies of preschool programs. *Child Development*, *78*(2), 558–580. https://doi.org/10.1111/j.1467-8624.2007.01014.x

Eddy, C. L., Herman, K. C., & Reinke, W. M. (2019). Single-item teacher stress and coping measures: Concurrent and predictive validity and sensitivity to change. *Journal of School Psychology*, *76*, 17–32. https://doi.org/10.1016/j.jsp.2019.05.001

Edwards, S., Blaise, M., & Hammer, M. (2009). Beyond developmentalism? Early childhood teachers' understandings of multiage grouping in early childhood education and care. *Australasian Journal of Early Childhood*, *34*(4), 55–63. https://doi.org/10.1177/183693910903400408

Elo, A.-L., Leppänen, A., & Jahkola, A. (2003). Validity of a single-item measure of stress symptoms. *Scandinavian Journal of Work Environment & Health*, *29*(6), 444–451. https://doi.org/10.5271/sjweh.752

Field, A. (2009). *Discovering statistics using SPSS* (2nd ed.). Sage.

Finnish Ministry of Education and Culture. (2021). *Two-year pre-primary education trial.*

Finnish National Agency for Education. (2014). *Esiopetuksen opetussuunnitelman perusteet 2014* [*The National Core Curriculum for Pre-Primary Education* 2014].

Finnish National Agency for Education. (2017). *Finnish education in a nutshell.* https://www.oph.fi/sites/default/files/documents/finnish_education_in_a_ nutshell.pdf

Finnish National Agency for Education. (2021). *Kaksivuotisen esiopetuksen kokeilun opetussuunnitelman perusteet 2021* [The National Core Curriculum for Two-Year Pre-Primary Education Trial 2021].

Finnish National Agency for Education. (2022). *Varhaiskasvatussuunnitelman perusteet 2022* [The National Core Curriculum for Early Childhood Education and Care 2022].

French, N. K. (1993). Elementary teacher stress and class size. *Journal of Research & Development in Education*, *26*(2), 66–73.

Friedman-Krauss, A. H., Raver, C. C., Morris, P. A., & Jones, S. M. (2014). The role of classroom-level child behavior problems in predicting preschool teacher stress and classroom emotional climate. *Early Education & Development*, *25*(4), 530–552. https://doi.org/10.1080/10409289.2013.817030

Gagné, M., Forest, J., Gilbert, M.-H., Aubé, C., Morin, E., & Malorni, A. (2010). The motivation at work scale: Validation evidence in two languages. *Educational and Psychological Measurement*, *70*(4), 628–646. https://doi.org/10.1177/0013164409355698

Government Decree on Early Childhood Education and Care [Valtioneuvoston asetus varhaiskasvatuksesta] 753/2018. (2018). https://www.finlex.fi/fi/laki/ajantasa/2018/20180753

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organization Behavior and Human Decision Processes*, *16*(2), 250–279. https://doi.org/10.1016/0030-5073(76)90016-7

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, *43*(6), 495–513. https://doi.org/10.1016/j.jsp.2005.11.001

Hall-Kenyon, K. M., Bullough, R. V., Jr., MacKay, K. L., & Marshall, E. E. (2014). Preschool teacher well-being: A review of the literature. *Early Childhood Education Journal*, *42*(3), 153–162. https://doi.org/10.1007/s10643-013-0595-4

Hamre, B. K., & Pianta, R. C. (2004). Self-reported depression in nonfamilial caregivers: Prevalence and associations with caregiver behavior in child-care settings. *Early Childhood Research Quarterly*, *19*(2), 297–318. https://doi.org/10.1016/j.ecresq.2004.04.006

Hascher, T., & Waber, J. (2021). Teacher well-being: A systematic review of the research literature from the year 2000–2019. *Educational Research Review*, *34*, 100411. https://doi.org/10.1016/j.edurev.2021.100411

Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions*, *20*(2), 90–100. https://doi.org/10.1177/1098300717732066

Hofmans, J., Wille, B., & Schreurs, B. (2020). Person-centered methods in vocational research. *Journal of Vocational Behavior*, *118*, Article 103398. 103398. https://doi.org/10.1016/j.jvb.2020.103398

Høigaard, R., Giske, R., & Sundsli, K. (2012). Newly qualified teachers' work engagement and teacher efficacy influences on job satisfaction, burnout, and the intention to quit. *European Journal of Teacher Education*, *35*(3), 347–357. https://doi.org/10.1080/02619768.2011.633993

Howard, S., & Johnson, B. (2004). Resilient teachers: Resisting stress and burnout. *Social Psychology of Education: An International Journal*, *7*(4), 399–420. https://doi.org/10.1007/s11218-004-0975-0

Huang, Y., Nalipay, M. J. N., & Wang, H. (2024). Profiles of occupational well-being among Chinese teachers: Associations with basic psychological needs satisfaction and teaching quality. *Teaching & Teacher Education*, *139*, 104461. https://doi.org/10.1016/j.tate.2023.104461

Huang, Y., Richter, E., Kleickmann, T., & Richter, D. (2022). Class size affects preservice teachers' physiological and psychological stress reactions: An experiment in a virtual reality classroom. *Computers & Education*, *184*, 104503. https://doi.org/10.1016/j.compedu.2022.104503

Hur, E., Jeon, L., & Buettner, C. K. (2016). Preschool teachers' child-centred beliefs: Direct and indirect associations with work climate and job-related wellbeing. *Child & Youth Care Forum*, *45*(3), 451–465. https://doi.org/10.1007/s10566-015-9338-6

Izadi, R., Sarvimäki, M., & Harjunen, O. (2022). *Pre-analysis plan: Finland's preschool expansion experiment*. https://doi.org/10.1257/rct.8061-2.1

Jeon, L., Buettner, C. K., & Grant, A. A. (2018). Early childhood teachers' psychological well-being: Exploring potential predictors of depression, stress, and emotional exhaustion. *Early Education & Development*, *29*(1), 53–69. https://doi.org/10.1080/10409289.2017.1341806

Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology*, *20*(2), 178–187. https://doi.org/10.1108/02683940510579803

Karila, K., & Nummenmaa, A. R. (2001). *Matkalla moniammatillisuuteen – kuvauskohteena päiväkoti* [On the way to interprofessionalism – Kindergarten as the description context]. WS Bookwell Oy.

Klassen, R. M., & Chiu, M. M. (2011). The occupational commitment and intention to quit of practicing and pre-service teachers: Influence of self efficacy, job stress, and teaching context. *Contemporary Educational Psychology*, *36*(2), 114–129. https://doi.org/10.1016/j.cedpsych.2011.01.002

Klassen, R. M., Perry, N. E., & Frenzel, A. C. (2012). Teachers' relatedness with students: An underemphasized component of teachers' basic psychological needs. *Journal of Educational Psychology*, *104*(1), 150–165. https://doi.org/10.1037/a0026253

Kwon, K., Ford, T. G., Salvatore, A. L., Randall, K., Jeon, L., Malek-Lasater, A., Ellis, N., Kile, M., Horm, D., Kim, S. G., & Han, M. (2022). Neglected elements of a high-quality early childhood workforce: Whole teacher well-being and working conditions. *Early Childhood Education Journal*, *50*(1), 157–168. https://doi.org/10.1007/s10643-020-01124-7

Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review*, *53*(1), 27–35. https://doi.org/10.1080/00131910120033628

Lazarus, R. S., & Folkman, S. (1984). *Stress appraisal and coping*. Springer Publishing Company, Inc.

Leseman, P. (2009). The impact of high quality education and care on the development of young children: Review of the literature. *Early Childhood Education and Care in Europe: Tackling Social and Cultural Inequalities*, 17–49. https://doi.org/10.2797/18055

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, *83*(404), 1198–1202. https://doi.org/10.1080/01621459.1988.10478722

Lo, Y., Mendell, N. R., & Rubin, D. B. (2001). Testing the number of components in a normal mixture. *Biometrical*, *88*(3), 767–778. https://doi.org/10.1093/Biomet/88.3.767

Løvgren, M. (2016). Emotional exhaustion in day-care workers. *European Early Childhood Education Research Journal*, *24*(1), 157–167. https://doi.org/10.1080/1350293X.2015.1120525

Lubke, G. H., & Muthén, B. (2005). Investigating population heterogeneity with factor mixture models. *Psychological Methods*, *10*(1), 21–39. https://doi.org/10.1037/1082-989X.10.1.21

Manlove, E. E. (1993). Multiple correlates of burnout in child care workers. *Early Childhood Research Quarterly*, *8*(4), 499–518. https://doi.org/10.1016/s0885-2006(05)80082-1

Mashburn, A. J., Pianta, R. C., Hamre, B. K., Downer, J. T., Barbarin, O. A., Bryant, D., Burchinal, M., Early, D. M., & Howes, C. (2008). Measures of classroom quality in prekindergarten and children's development of academic, language, and social skills. *Child Development*, *79*(3), 732–749. https://doi.org/10.1111/j.1467-8624.2008.01154.x

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*(1), 397–422. https://doi.org/10.1146/annurev.psych.52.1.397

Melhuish, E., Ereky-Stevens, K., Petrogiannis, K., Ariescu, A., Penderi, E., Rentzou, K., Tawell, A., Slot, P., Broekhuizen, M., & Leseman, P. (2015). *A review of research on the effects of early childhood education and care (ECEC) upon child development. CARE project. Curriculum quality analysis and impact review of European early childhood education and care (ECEC)*. http://ecec-care.org/resources/publications

Muhonen, H., Saranko, L., Sulkanen, M., Alasuutari, M., & Lerkkanen, M.-K. (2024). Kaksivuotisen esiopetuksen kokeilun opettajien käsityksiä viisivuotiaiden lasten esiopetuksen ja varhaiskasvatuksen eroista [Perceptions of the teachers of the two-year pre-primary education trial concerning the differences between pre-primary education and early childhood education for five-year-old children]. *Journal of Early Childhood Education Research*, *13*(2), 215–246. https://doi.org/10.58955/jecer.131857

Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus users guide and Mplus version 8*. http://www.statmodel.com/index.shtml

Nislin, M. A., Sajaniemi, N. K., Sims, M., Suhonen, E., Maldonado Montero, E. F., Hirvonen, A., & Hyttinen, S. (2016). Pedagogical work, stress regulation and work-related well-being among early childhood professionals in integrated

special day-care groups. *European Journal of Special Needs Education*, *31*(1), 27–43. https://doi.org/10.1080/08856257.2015.1087127

Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A monte carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal*, *14*(4), 535–569. https://doi.org/10.1080/10705510701575396

Penttinen, V., Pakarinen, E., von Suchodoletz, A., & Lerkkanen, M.-K. (2020). Relations between kindergarten teachers' occupational well-being and the quality of teacher-child interactions. *Early Education & Development*, *31*(7), 994–1010. https://doi.org/10.1080/10409289.2020.1785265

Penttinen, V., Pakarinen, E., von Suchodoletz, A., & Lerkkanen, M.-K. (2023). The quality of teacher-child interactions and teachers' occupational well-being in Finnish kindergartens: A person-centered approach. *Early Education & Development*, *34*(7), 1506–1527. https://doi.org/10.1080/10409289.2022.2139549

Perera, H. N., Vosicka, L., Granziera, H., & McIlveen, P. (2018). Towards an integrative perspective on the structure of teacher work engagement. *Journal of Vocational Behavior*, *108*, 28–41. https://doi.org/10.1016/J.JVB.2018.05.006

Pöysä, S., Pakarinen, E., & Lerkkanen, M. K. (2022). Profiles of work engagement and work-related effort and reward among teachers: Associations to occupational well-being and leader-follower relationship during the Covid-19 pandemic. *Frontiers in Psychology*, *13*, 861300. https://doi.org/10.3389/fpsyg.2022.861300

Pöysä, S., Pakarinen, E., & Lerkkanen, M.-K. (2021). Patterns of teachers' occupational well-being during the Covid-19 pandemic: Relations to experiences of exhaustion and recovery, and interactional styles of teaching. *Frontiers in Education*, *6*, 699785. https://doi.org/10.3389/feduc.2021.699785

Pyhältö, K., Pietarinen, J., & Salmela-Aro, K. (2011). Teacher–working-environment fit as a framework for burnout experienced by Finnish teachers. *Teaching & Teacher Education*, *27*(7), 1101–1110. https://doi.org/10.1016/j.tate.2011.05.006

Richards, J. (2012). Teacher stress and coping strategies: A national snapshot. *The Educational Forum*, *76*(3), 299–316. https://doi.org/10.1080/00131725.2012.682837

Salmela-Aro, K., Hietajärvi, L., & Lonka, K. (2019). Work burnout and engagement profiles among teachers. *Frontiers in Psychology*, *10*, 2254. https://doi.org/10.3389/fpsyg.2019.02254

Salmela-Aro, K., Upadyaya, K., & Hietajärvi, L. (2020). Suomalaisten rehtorien ja opettajien työhyvinvointiprofiilit koronakeväänä [Work-related well-being profiles among Finnish school teachers and principals during the spring of Covid-19]. *Psykologia*, *55*(6), 426–443.

Saloviita, T., & Pakarinen, E. (2021). Teacher burnout explained: Teacher-, student-, and organisation-level variables. *Teaching & Teacher Education*, *97*, 103221. https://doi.org/10.1016/j.tate.2020.103221

Sandilos, L. E., Cycyk, L. M., Scheffner Hammer, C., Sawyer, B. E., López, L., & Blair, C. (2015). Depression, control, and climate: An examination of factors impacting teaching quality in preschool classrooms. *Early Education & Development*, *26*(8), 1111–1127. https://doi.org/10.1080/10409289.2015.1027624

Sarvimäki, M., Alasuutari, M., Harjunen, O., Holvio, A., Izadi, R., Kalland, M., Kuusiholma-Linnamäki, J., Laakso, M.-J., Lerkkanen, M.-K., Muhonen, H., Räsänen, P., Salmela-Aro, K., Saranko, L., Sulkanen, M., & Upadyaya, K. (2023). *Kaksivuotisen esiopetuksen kokeilu: Väliraportti* [Two-year pre-primary education experiment: Interim report]. Opetus- ja kulttuuriministeriön julkaisuja 2023:19. Helsinki: Opetus- ja kulttuuriministeriö. http://urn.fi/URN:ISBN:978-952-263-971-4

Schaack, D. D., Le, V.-N., & Stedron, J. (2020). When fulfillment is not enough: Early childhood teacher occupational burnout and turnover intentions from a job demands and resources perspective. *Early Education and 68 Development*, *31*(7), 1011–1030. https://doi.org/10.1080/10409289.2020.1791648

Schaufeli, W. B., & Bakker, A. B. (2003). *Utrecht work engagement scale: Preliminary manual*. Occupational Health Psychology Unit, Utrecht University.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. *Educational and Psychological Measurement*, *66*(4), 701–716. https://doi.org/10.1177/0013164405282471

Schreyer, I., & Krause, M. (2016). Pedagogical staff in children's day care centers in Germany – links between working conditions, job satisfaction, commitment and work-related stress. *Early Years: An International Research Journal*, *36*(2), 132–147. https://doi.org/10.1080/09575146.2015.1115390

Seppälä, P., Mauno, S., Feldt, T., Hakanen, J., Kinnunen, U., Tolvanen, A., & Schaufeli, W. (2009). The construct validity of the Utrecht work engagement scale: Multisample and longitudinal evidence. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *10*(4), 459–481. https://doi.org/10.1007/s10902-008-9100-y

Siegrist, J., Starke, D., Chandola, T., Godin, I., Marmot, M., Niedhammer, I., & Peter, R. (2004). The measurement of effort–reward imbalance at work: European comparisons. *Social Science & Medicine*, *58*(8), 1483–1499. https://doi.org/10.1016/S0277-9536(03)00351-4

Sinclair, C. (2008). Initial and changing student teacher motivation and commitment to teaching. *Asia-Pacific Journal of Teacher Education*, *36*(2), 79–104. https://doi.org/10.1080/13598660801971658

Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching & Teacher Education*, *26*(4), 1059–1069. https://doi.org/10.1016/j.tate.2009.11.001

Skaalvik, E. M., & Skaalvik, S. (2015). Job satisfaction, stress and coping strategies in the teaching profession-what do teachers say? *International Education Studies*, *8*(3), 181–192. https://doi.org/10.5539/ies.v8n3p181

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The Work and Meaning Inventory (WAMI). *Journal of Career Assessment*, *20*(3), 322–337. https://doi.org/10.1177/1069072711436160

Stipek, D. (2006). No child left behind comes to preschool. *The Elementary School Journal*, *106*(5), 455–466. https://doi.org/10.1086/505440

Travers, C. J., & Cooper, C. L. (1996). *Teachers under pressure: Stress in the teaching profession*. Routledge.

United Nations Educational, Scientific and Cultural Organization. (2021). *Right to pre-primary education: A global study*. https://unesdoc.unesco.org/ark:/48223/pf0000375370

United Nations International Children's Emergency Fund. (2022). *Pre-primary education*. https://data.unicef.org/topic/education/pre-primary-education/

Unterbrink, T., Hack, A., Pfeifer, R., Buhl-Griesshaber, V., Müller, U., Wesche, H., Frommhold, M., Scheuch, K., Seibt, R., Wirsching, M., & Bauer, J. (2007). Burnout and effort–reward-imbalance in a sample of 949 German teachers. *International Archives of Occupational and Environmental Health*, *80*(5), 433–441. https://doi.org/10.1007/s00420-007-0169-0

van Vegchel, N., de Jonge, J., Bosma, H., & Schaufeli, W. (2005). Reviewing the effort–reward imbalance model: Drawing up the balance of 45 empirical studies. *Social Science & Medicine*, *60*(5), 1117–1131. https://doi.org/10.1016/j.socscimed.2004.06.043

Vermunt, J., & Magidson, J. (2002). Latent class cluster analysis. In J. Hagenaars & A. McCutcheon (Eds.), *Applied latent class analysis* (pp. 89–106). Cambridge University Press. https://doi.org/10.1017/CBO9780511499531.004

Virtanen, T. E., Vaaland, G. S., & Ertesvåg, S. K. (2019). Associations between observed patterns of classroom interactions and teacher wellbeing in lower secondary school. *Teaching & Teacher Education*, *77*, 240–252. https://doi.org/10.1016/j.tate.2018.10.013

Wang, Y., Ramos, A. G., Wu, H., Liu, L., Yang, X., Wang, J., & Wang, L. (2015). Relationship between occupational stress and burnout among Chinese teachers: A cross-sectional survey in Liaoning, China. *International Archives of Occupational and Environmental Health*, *88*(5), 589–597. https://doi.org/10.1007/s00420-014-0987-9

Wells, M. B. (2015). Predicting preschool teacher retention and turnover in newly hired head start teachers across the first half of the school year. *Early Childhood Research Quarterly*, *30*, 152–159. https://doi.org/10.1016/j.ecresq.2014.10.003

Whitaker, R. C., Dearth-Wesley, T., & Goose, R. A. (2015). Workplace stress and the quality of teacher–children relationships in head start. *Early Childhood Research Quarterly*, *30*, 57–69. https://doi.org/10.1016/j.ecresq.2014.08.008

Wisse, B., & Sleebos, E. (2016). When change causes stress: Effects of self-construal and change consequences. *Journal of Business & Psychology*, *31*(2), 249–264. https://doi.org/10.1007/s10869-015-9411-z