

UNIVERSITY OF TAMPERE

School of Management

**CONNECTIONS BETWEEN RESILIENCE, WORK-RELATED  
FACTORS AND PERCEIVED ORGANISATIONAL  
PRACTICES**

Focus on older Finnish nurses

Management and Organizations  
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Supervisor: Hanna Salminen

Valentina Trifoglio

# ABSTRACT

University of Tampere      School of Management, Management and Organizations

Author: TRIFOGLIO, VALENTINA  
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The aim of this study was to examine associations between resilience, work-related factors and perceived organisational practices among older Finnish nurses, especially focusing on the retention of older employees. Work-related factors included work ability, job satisfaction, organisational commitment and intentions to continue working until retirement age. Perceived organisational practices included high-involvement work practices (HIWP), organisational justice and supervisor's support. Resilience is conceptualized in this study through the positive psychology framework as a developable capability of individuals to "bounce back" from adversities. The study of resilience is extremely important in the light of today's constantly changing and stressful work environment and especially in regards to the aging society, which has been recognized as a major global risk in the upcoming years.

Data were collected during the spring of 2016 from a Finnish University Hospital as part of the JATKIS research project at the University of Jyväskylä. The participants consisted of 396 hospital nurses aged 50 and over, with the average age of 57. Data were analyzed with quantitative methods by using descriptive statistics, analysis of variance (ANOVA), correlations and linear regression analysis.

Results showed that older nurses were relatively resilient and perceived their work ability and job satisfaction as quite high. In addition, findings of this study showed multiple significant relationships between resilience, work-related factors and organisational practices. Resilience was found to be positively related to work ability and job satisfaction. Work-ability instead, was found to be significantly related to job satisfaction, organisational commitment and intentions to continue working until retirement age. In regards to organisational practices, resilience was found to be significantly associated with supervisor's support. Background variables, especially the perceived financial situation of participants, were, in addition, found to be related to levels of resilience and different work-related factors. The results of this study confirmed the importance of resilience for maintaining high levels of work ability and job satisfaction and the importance of work ability for the intentions to continue working until retirement age.

Practical implications for organizations include the importance of understanding resilience and its significance for the wellbeing and retention of older employees. Organisations and its human resource functions, as well as managers, should focus on developing and implementing resilience-enhancing practices, especially concentrating on the support of supervisors for older employees and their needs.

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Tämän tutkimuksen tarkoituksena oli selvittää resilienssin, työhön liittyvien tekijöiden ja koettujen organisaatiokäytäntöjen välisiä yhteyksiä suomalaisten ikääntyvien sairaanhoitajien keskuudessa, erityisesti huomioiden ikääntyneiden työntekijöiden aikomukset jatkaa työssä eläkeikään asti. Työhön liittyvät tekijät sisälsivät työkyvyn, työtyytyväisyyden, organisaatioon sitoutumisen sekä aikomukset jatkaa työskentelyä eläkeikään asti. Koetut organisaatiokäytännöt puolestaan sisälsivät osallistavat HR-käytännöt (HIWP), organisaation oikeudenmukaisuuden sekä esimiehen tuen. Resilienssi määriteltiin tässä tutkimuksessa positiivisen psykologian viitekehyksen kautta yksilön kykyä palautua vastoinkäymisistä, ja jopa kukoistaa vastoinkäymisistä huolimatta. Resilienssin tutkiminen on erittäin tärkeää huomioiden nykypäivän alati muuttuvan ja kuormittavan työympäristön, sekä erityisesti ikääntyvän väestön tuomat haasteet työelämälle. Nämä haasteet on tunnistettu merkittäviksi globaaleiksi riskeiksi tulevina vuosina.

Tutkimuksen aineisto kerättiin kevään 2016 aikana yhdestä suomalaisesta yliopistosairaalaista osana Jyväskylän yliopiston JATKIS-tutkimushanketta. Aineisto koostui yli 50 vuotiaista hoitoalan työntekijöistä ( $n = 396$ ), joiden keski-ikä oli 57 vuotta. Aineisto analysoitiin kvantitatiivisin menetelmin hyödyntäen kuvailevia menetelmiä, yksisuuntaista varianssianalyysiä (ANOVA) ja lineaarista regressioanalyysiä.

Tulokset osoittivat, että suomalaiset ikääntyvät hoitajat ovat melko resilienttejä ja he kokevat sekä työkykynsä että työtyytyväisyytensä melko korkeaksi. Lisäksi tulokset osoittivat useampia merkitseviä yhteyksiä resilienssin, työhön liittyvien tekijöiden ja koettujen organisaatiokäytäntöjen välillä. Resilienssi oli positiivisesti yhteydessä työkykyyn ja työtyytyväisyyteen. Työkyky puolestaan oli merkitsevästi yhteydessä työtyytyväisyyteen, organisaation sitoutumiseen ja aikomuksiin jatkaa työssä eläkeikään asti. Organisaatiokäytäntöjen osalta, resilienssin todettiin olevan merkitsevästi yhteydessä koettuun esimiehen tukeen. Resilienssin, työhön liittyvien tekijöiden ja taustamuuttujien välillä, yhteyksiä havaittiin erityisesti osallistujien taloudellisen tilanteen osalta. Tulokset vahvistivat käsitystä resilienssin merkityksestä työkyvyn ja työtyytyväisyyden ylläpidossa sekä työkyvyn merkityksestä aikomuksiin jatkaa työssä eläkeikään asti.

Ehdotetut käytännön toimenpiteet organisaatioille liittyivät resilienssin merkityksen ymmärtämiseen työhyvinvoinnin ja työssäjatkamisen kannalta. Organisaatioiden ja HR ammattilaisten sekä johtajien olisi tärkeää painottaa toimissaan ja käytännöissään ikääntyvien työntekijöiden resilienssin vahvistamista ja kehittämistä, erityisesti esimiehen tuen kautta.

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# 1. INTRODUCTION

## 1.1 Background of the study

A turbulent and stressful work environment combined with changing organizational structures, ageing of the population and the fear of a new economic recession have made career management and maintaining a good level of wellbeing at work an overwhelming challenge for individuals (Lyons, Schweitzer & Ng, 2015). Employees are increasingly changing jobs throughout their life, but also experiencing more stress than ever before in history (Luthans, Vogelgesang & Lester, 2006). To remain adaptable and resilient in this increased pressure, the new work environment requires higher psychological capital and increased psychological resources to cope with career uncertainty and to thrive in this changing environment (Britt, Sinclair, Grossman & Klieger, 2016).

For individuals and organisations to navigate successfully through these times, it has been proposed that resilience should be enhanced in organizations. Especially human resource (HR) functions, managers and departments will have to focus their work on investing and developing resilience-enhancing strategies and organisational practices. (Luthans et al., 2006.) Previous studies have demonstrated that resilience is needed to better respond to and to “bounce back” from adversities, whether major life changing events or less significant daily hassles (Fletcher & Sarkar, 2013). Therefore, organizations have been growingly interested in attempting to select for, invest and develop resilience (Britt et al., 2016). Employee resilience has been shown to reduce the amount of individual stress during organisational change and to increase organisational commitment during changes, thus, being a crucial resource in today’s turbulent work environment (Chiaburu, Baken & Pitariu, 2006; Day & Allen, 2004). To address the most pressing questions that organizations and scholars of the field are facing nowadays, it is vital to understand how organizations and individuals adjust under pressure and adversities, and come out of it even more resilient (Vogus & Sutcliffe, 2007).

Resilience is conceptualized as a general quality demonstrated in a rather consistent level across multiple contexts within one’s life (Britt et al., 2016), meaning that highly resilient individuals most probably thrive in both work-related and non-work related contexts (Turner,

2014). At the individual level, resilience has been conceptualized as the capacity of employees to “bounce back” from adversities and challenging events (Linnenluecke, 2017) while staying focused and optimistic about upcoming events in life (Cope, Jones & Hendricks, 2016). It is a developable ability of an individual to even succeed, grow and strengthen in face of adversities or major setbacks in all areas of life, including worklife (Lyons et al., 2015). The term commonly refers to the quality of both organizations and individuals (Linnenluecke, 2017), however, this study focuses on resilience as the capacity of an individual to recover, adapt and face adversities in the work environment.

### **1.1.1 Resilience in the work environment**

Resilience has been found to be associated to many characteristics that can be viewed as favourable in a work environment. Resilient employees are more emotionally stable during stressful events, more open to new experiences and more adaptable and flexible facing changes. (Tugade & Fredrickson, 2004.) Organisations have indeed noted the significance of resilience for employees, teams, and organisations and there has, thus, been an increased interest to understand and investigate resilience both in psychological and organisational research. However, resilience is an under-researched aspect of modern careers and it has received fairly little consideration in the research of HR or career development. (Lyons et al., 2015.)

Scholars of positive psychology have claimed that organisations concentrating on building or developing employee resilience are expected to be more easily adaptable and successful over time. Resilient employees make the whole organisation resilient, thus, gaining competitive advantage compared to their non-resilient rivals. (Bardoel, Pettit, De Cieri & McMillan, 2014.) Resilience at the organizational level has been found to make organisations more successful when it comes to dealing with, responding to, and even surviving sudden changes or unexpected and intensely challenging events. Resilient organisations respond to and recover from changes faster, and are more innovative under challenging situations. (Linnenluecke, 2017.)

Even though studies have shown that there is a significant relationship between organisational practices and organisational performance, human resource management (HRM) has still not been valued enough in many organisations, since organisational and HR practices and their

contributions are rarely measured in tangible terms. Thus, HR departments and functions are under growing pressure and investigation to show value creation in organisations. The construct of resilience has, therefore, been a popular subject among HR professionals and they have started promoting employee resilience to show their value in building successful organizations. (Chiaburu et al., 2006; Day & Allen, 2004.)

Research shows that resilience is developable through multiple HR- and organisational practices (Tugade & Fredrickson, 2004). For example supervisor support, mentoring and empowerment of employees has been found to lead to greater employee resilience (Chiaburu et al., 2006; Day & Allen, 2004). Organizations and their HR departments are seen to be capable of developing resilience, thus, improving employees' abilities to cope with changes and adversities (Linnenluecke, 2017). However, the relationship between organisational practices and resilience warrants more research (Bardoel et al., 2014).

Previous research has shown that resilient employees are an important asset for organisations in addressing change, since they are more capable of dealing with a continuously changing work environment (Shin, Taylor & Seo, 2012). In light of these stressful and turbulent times, and drawing from previous research and literature, it is more important than ever to investigate resilience in the work environment. The current study aims to further research in this field by investigating connections between resilience, work-related factors, such as work ability and job satisfaction, and organisational practices, such as perceived high-involvement work practices (HIWP) and perceived supervisor's support, thus, contributing to the study of this important construct.

### **1.1.2 Older employees in the workforce**

This study aims to further research on older employee resilience, since this issue has particular relevance for Western societies, where the workforce is rapidly ageing. Especially for Finland, where the population is ageing more rapidly than in most societies in the world because of higher life expectancy, the large baby-boom generation, and the low fertility rate (Ilmarinen, 2006). Due to the decrease in fertility and greater longevity, the ageing population is a global trend (Alley & Crimmins, 2007). In Finland, the life expectancy has increased by 25 years during the last century, with life expectancy being currently 84 years for women and 78 years for men (Statistics Finland, 2017). This trend is recognized as one of the most



significant global challenges in the upcoming years (Hennekam, 2015) and it is creating new economic and socio-political challenges for societies (Pärnänen, 2012).

By 2050, almost a third of the workforce will be aged 50 and over in developed countries (Armstrong-Stassen & Cattaneo, 2010). It has been estimated that by 2030 in Finland 26 percent of the population will be over 65 years (Statistics Finland, 2015). While at the moment in the EU there are four working people for every retired person, it has been projected that in 2060 there will only be two working people for one retired individual (Zaniboni, Fraccaroli & Truxillo, 2015). Simultaneously, however, the employment of the older population has been decreasing steadily (Armstrong-Stassen, 2008). In Finland, the amount of retirees has already exceeded the amount of employees joining the labour force (Siekkinen, Manka, Tammivuori & Laine, 2005). Due to these demographic changes, Finland, for example, has actively been searching for ways to retain older employees in the workforce (Ilmarinen, 2006).

Due to the decreasing quantity of young employees, organisations are increasingly relying on the contribution of older employees (Herrbach, Mignonac, Vandenberghe & Negrini, 2009). However, the average effective retirement age in Finland at the moment is 61 years and the employment rate of those aged 55–64 is only around 60 percent (Finnish Centre for Pensions, 2017). In Europe, for example, less than 50 percent of the male population aged 55–64 is currently working (Armstrong-Stassen, 2008). Furthermore, in Finland, one in four new retirees in 2016 had to retire due to insufficient work ability (Finnish Centre for Pensions, 2017). Work ability is defined as an employee's ability to conduct their work, having both the professional competences and the needed health to conduct work tasks (Airila, Hakanen, Schaufeli, Luukkonen, Punakallio & Lusa, 2014). Healthy employees have indeed been found to stay employed for longer (Wang & Shi, 2014). Investing in older employees has been found to be a valuable asset for organizations, since when they are treated fairly and feeling their work contribution as valued, they stay with their organization for longer (Hennekam, 2015). Thus, it is crucial for organizations to invest in the wellbeing of older employees and find ways to retain them at work for longer. As crucial, it is for current studies to focus on older employees and ways to maintain high levels of work ability among them.

The ageing population is not a challenge just for organizations, but for the whole society as well, since for example the structure of retirement benefits is coming under increasing

pressure not only in Finland but world widely (Alley & Crimmins, 2007). Keeping older employees employed for longer can address this challenge as well by, for example, decreasing retirement expenditures (OECD, 2001; Pärnänen, 2012). Another possible solution is to increase the employment rate of older individuals. In Finland, the prolonging of careers is one of the main goals of social policy and the age of retirement has indeed been increased during the past years. The Finnish pension reforms, which included a new flexible retirement age and significant economic incentives, have been a major step to keep older employees in the workforce. (Pärnänen, 2012.) The challenges brought by the ageing workforce have also urged the research of HRM to focus on and search for ways to retain older employees at work for longer (Salminen et al., 2016).

As employees grow older, the challenges of keeping high levels of motivation and energy for the demanding and continuously changing work environment rises as well. In addition to the changing environment, older employees face challenges related to the ageing process and unexpected personal circumstances. These challenges may begin to have an effect on motivation, resilience and organisational commitment, which are vital to the willingness and ability to maintain a good level of work ability. (Day & Gu, 2009.) Older employees experience, in addition to work-related challenges, more non-work related adversities as well, compared to their younger peers, such as losses, age-related health issues and changes in their everyday life (Hildon, Smith, Netuveli & Blane, 2008).

Considering both work-related and non-work related challenges and the challenges brought by organisational changes and societal factors, developing resilience among older employees seems crucial for their wellbeing and is, therefore, extremely important to explore further. Especially since only few studies have investigated how to achieve resilience among older employees (Hildon et al., 2008) and since resilience is viewed as a general and consistent quality across multiple contexts in life, thus, protecting from both work-related and non-work related adversities (Britt et al., 2016). In addition, wellbeing at work has been found to be crucial for the intentions of older employees to continue working until retirement (Siekkinen et al., 2005) and resilience has often been associated with many factors closely related to work-related wellbeing (Hardy, Concato & Gill, 2004; Tugade & Fredrickson, 2004).

HR practices have been found to be significant in increasing commitment towards the organisation and for retaining older employees at work, especially those close to retirement

age (Wang & Shultz, 2010). Organisations have the responsibility to identify practices that increase the job satisfaction, commitment and overall wellbeing of older employees and implementing those practices throughout the organisation. Especially managers and supervisors have an important role in identifying those needs and finding solutions to support and encourage older employees. (Zaniboni et al., 2015.) However, research in the field has not been able to find a comprehensive set of HR practices that would suit universally different organisations or industries (Vanhala & von Bonsdorff, 2012). This study aims to further investigation in this field and seeks to identify beneficial practices for enhancing resilience among older employees.

### **1.1.3 Hospital care and nurses**

One industry where the job strains and demands are deniably high is the healthcare industry. The occupational setting of nursing contains constantly stressful, traumatic or hard situations, since these challenges are common to the very nature of nursing. (Cope et al., 2016.) The stressfulness of nursing results from high workloads, continuous changes in the nursing industry, a lack of supplies, and the aging of the workforce. It has also been suggested that factors influencing the stressfulness of the job include the negative focus of nursing, with its problem-focused practices, and the witnessing of suffering and misfortunes on a daily basis. (Hatler & Sturgeon, 2013.) The heavy workload inherent to nursing causes increased turnover and significantly affects nurses' health and professional satisfaction (Golubic, Milosevic, Knezevic & Mustajbegovic, 2009). In previous studies, job dissatisfaction among nurses has been associated to increased turnover intentions (Alsaraireh, Quinn Griffin, Ziehm & Fitzpatrick, 2014). An increasing amount of nurses have indeed been found to repeatedly consider leaving nursing and aiming to retire as soon as possible (Salminen et al., 2016).

Due to stressors in the health care industry, nurses are also at increased risk of decrease and loss of work ability. Lower levels of work ability among nurses have been linked to older age, weak work organization, lacking financial resources and lower levels of education. (Golubic et al., 2009.) Studies have shown that high work ability decreases the risk for both organisational and occupational turnover intentions as well as early retirement intentions (Salminen et al., 2016). Also the shift work inherent to nursing has been found to affect work ability. Low levels of work ability have, consequently, been related to increased intentions to leave nursing. In Finland, the differences in levels of work ability between younger aged and

older nurses are higher than in other European countries. Early retirement has become increasingly difficult and the employment rate of nurses has doubled among those aged 50–64. Thus, many older Finnish nurses are forced to continue working regardless of low levels of work ability. Older nurses have also more limited opportunities to leave their work and, thus, have to endure working even with lower levels of work ability. (Camerino, Conway, van der Heijden, Estryn-Behar, Consonni, Gould & Hasselhorn, 2006.)

Due to the highly demanding environment of health care, resilience has been found to be a vital quality for nurses, especially regarding the retention of nurses; research has shown that resilient nurses are at reduced risk of experiencing stress and more likely to work as healthy nurses for longer. Resilience has also been demonstrated to be associated with high levels of work ability, although the association has been found to be mediated by commitment. (Airila et al., 2014.) In addition, resilience has been found to be essential to the willingness and capacity of maintaining a good level of work ability (Day & Gu, 2009). Resilience has also been associated with higher levels of job satisfaction among nurses (Matos, Neushotz, Griffin & Fitzpatrick, 2010). Thus, it is a particularly important construct especially for nursing management and leaders to understand for the improvement and enhancement of the wellbeing of nurses and the nursing industry. Nurses face challenges on a daily basis, including caring for critically ill or dying patients, emotional fatigue and a lack of resources due to the shortage of nurses. (Turner, 2014.) This study aims to further research among the wellbeing of nurses by examining associations between their resilience, work ability and job satisfaction. In addition, this study focuses on the retention of older nurses, thus also examining associations between these factors and nurses' intentions to continue working until retirement age.

The Finnish Institute of Occupational Health has surveyed how the Finnish social and health care industry has changed during the last twenty years. Results show that working in hospital care offer a wide range of positive feelings, like experiences of success and happiness; however, many feel experiences of insufficiency as well. Results, in fact, show that the strain of working in hospital care has systematically increased during the years, due to the increased amount of patients, increased hurry and increased feelings of responsibility toward patients. Feelings of stress in the health care industry are found to be slightly more common than in other industries. Also the physical strain of hospital care work has increased during the last twenty years. (Laine, Kokkinen, Kaarlela-Tuomaala, Valtanen, Elovainio, Keinänen &

Suomi, 2011.)

Even though the number of nurses has been increasing steadily during the past 20 years, there is a growing concern, not only in Finland, but globally, of a future shortage of nurses. This concern is due to the increasing demand of the ageing population and the retirement of current nurses. (OECD, 2017.) The nursing shortage is indeed seen as a one of the most pressing concerns in healthcare at the moment (Salminen et al., 2016). Even though nurses form one of the biggest occupational groups among the health workforce, for example in the US, there is already an insufficient amount of nurses to fill all the open vacancies (Kim, Geun, Choi & Lee, 2016). Due to these recruitment challenges and the retirement of experienced nurses, a shortage of qualified nurses seems to be inevitable in the near future (Cope et al., 2016). Previous research suggests that this shortage is, in addition to retirement, due to decreased job satisfaction, experiences of burnout and stress, fatigue, moral dilemmas and decreased experiences of personal accomplishment (Turner, 2014).

In Finland, there are approximately 10 nurses for 1,000 people, which is slightly above the average of European countries. During the coming years, however, a large amount of Finnish nurses will be retiring. In addition, the nursing shortage is worsened by the occupational and organisational turnover among nurses. Research shows that about 25 percent of Finnish nurses consider occupational turnover whereas, almost 50 percent of Finnish nurses consider leaving their job. Even more pressure on the health care industry is put by the influences of economic downturn, which forces the field to greater financial efficiency. (Salminen et al., 2016.) In addition, Finnish nurses have faced a retirement reform in 2017, in which the retirement age have been increased, thus, forcing nurses to work for longer (Tenhunen, 2017).

Thus, it is crucial to find ways for retaining nurses at work for as long as possible. Resilience has been found to be essential for surviving the harmful effects of work-related stress and studies have shown that resilient employees are more likely to endure and survive work-related stress and even flourish despite of adversities in the work environment. Resilience is a fundamental attribute especially for nurses due to the increased ability to adapt and keep balance in the demanding and unpredictable health care environment. Research has shown that resilient nurses carry out their work effectively despite of stressful situations for the benefit of themselves, their patients and the organisation. (Cope et al., 2016.)

The industry structure has been changing as well, and major changes have been implemented in organisations. The Finnish public health-care sector is under a major structural reform, the social welfare and health care reform (SOTE), which aims to ensure seamless services for citizens across all areas of the country. This reform will affect health care employees across the country and change comprehensively the national organisation of health care services. (Finnish Government, 2014.) These changes bring along uncertainty, especially for older employees, who are more dependable on their current job than younger colleagues. Thus, it is more important than ever to develop the resilience of older Finnish nurses and enable them to deal with these changes and to thrive despite these organisational and structural changes.

Previous research has concluded that training aimed to enhance resilience acts as a buffer and as a protective factor in preventing harmful consequences of work-related adversities. Due to the shortage of nurses world widely, it is more important than ever to retain working nurses and to establish structures that can enhance and maintain their healthy functioning. (Cope et al., 2016.) The strains and demands of the healthcare industry and nursing are deniably high especially on older employees; thus, it is very important to further research in this field and find ways to increase their wellbeing at work and adaptation to the volatile work environment. This study aims to do just so by exploring resilience as an option for promoting, enhancing and sustaining the work ability and job satisfaction of older nurses, whilst retaining them at work for longer.

## **1.2 Research objectives**

The main objective of this study is to investigate possible connections between resilience, work-related factors and perceived organisational practices. The focus is on older employees and especially on how to retain them at work for longer. There is only little academic enquiry on resilience in the workplace, especially among older employees, and this study aims to further research on this important topic. This study aims to answer the questions of how common it is to experience adversities and how stressful they are experienced as, how resilient Finnish older nurses are and what is their level of work ability and job satisfaction. In addition, their intentions to continue working until retirement age are investigated as well. Furthermore, connections between resilience, work-related factors and organisational practices are investigated. Work-related factors include work ability, job satisfaction,

organisational commitment and intentions to continue working until retirement age and perceived organisational practices include high-involvement work practices (HIWP), organisational justice and supervisor's support,

The main study questions are:

1. How common it is to experience adversities among older nurses and how stressful these adverse life events are experienced as?
2. What is their level of resilience, work ability, job satisfaction and intention to continue working until retirement age?
3. How is resilience connected to work-related factors and organisational practices?

The stressful work environment inherent to nursing causes increased turnover and affects significantly nurses' work ability and job satisfaction (Golubic et al., 2009). In addition, older individuals are at increased risk of experiencing adversities in life (Hildon et al., 2008). However, previous studies have also demonstrated that resilience increases with age and that older individuals are at least 3 times more likely to be resilient compared to younger individuals (Bonanno, Galea, Bucciarelli & Vlahov, 2007; Hildon et al., 2008). Based on these notions, I expect the older nurses of this study to show at least an average amount of resilience. Also job satisfaction has been demonstrated in multiple studies to increase with age (Clark, Oswald & Warr, 1996). In addition, results of multiple previous studies show that most nurses show good levels of job satisfaction (Lu, Barriball, Zhang & While, 2012). Furthermore, resilience has been positively associated with good levels of work ability (Day & Gu, 2009) and with good levels of job satisfaction (Matos et al., 2010). Thus, I assume that participants will also show at least an average level of both work ability and job satisfaction.

Furthermore, based on previous research, I assume that resilience is related to multiple work-related factors, especially work ability and job satisfaction. Low work ability has been associated with increased intentions to leave nursing (Camerino et al., 2006). Thus, good levels of work ability among nurses decrease the risk for both organisational and occupational turnover intentions as well as early retirement intentions (Salminen et al., 2016). Low levels of job satisfaction have also been associated with turnover intentions (Alsarairh et al., 2014; Turner, 2014). Thus, I expect results to show significant associations between work ability, job satisfaction and intentions to continue working until retirement age.

In addition, this study examines associations between organisational practices and resilience to get insight on what practices might enhance resilience and consequently enhance the wellbeing of older employees. Through this examination, this study hopes to present some practical implications on how to retain older employees at work for longer. Previous research shows that organisational practices are significantly related to resilience (Bardoel et al., 2014; Lengnick-Hall, Lengnick-Hall & Beck, 2011; Tugade & Fredrickson, 2004; Turner, 2014;). Research on HIWP, especially in the health care sector, has, for example, been found to be associated with higher levels of job satisfaction (Harmon, Scotti, Behson, Farias, Petzel, Neuman & Keashly, 2003.) HIWP have also been significantly related to employee retention (Guthrie, 2001). Supervisor's and manager's support instead, has been found to have an important role in building and increasing resilience among employees (Hatler & Sturgeon, 2013; Lyons et al., 2015). In addition, older employees have been found to work for longer when treated fairly and feeling their work contribution as valued, thus, in organisations that cultivate a culture of organisational justice (Hennekam, 2015). Based on previous research, I assume resilience to be positively associated with the organisational practices investigated in this study, especially to HIWP and supervisor's support.

I will also investigate whether there are associations between resilience and background variables, such as age, gender, marital status or financial situation. Previous research has argued that factors like male gender, higher education and older age predict higher levels of resilience. In addition, research has shown that income is a significant predictor of resilience and that individuals with less available social support are not as likely to show resilience. (Bonanno et al., 2007.) Furthermore, insufficient financial resources have also been related to lower levels of work ability (Golubic et al., 2009). Multiple researches have demonstrated a significant associations between marital status and health among older individuals; married individuals demonstrating greater health and survival outcomes than single individuals (Goldman, Korenman & Weinstein, 1995). Thus, I assume that resilience and background variables, such as age and financial situation, will be significantly associated.

I attempt to answer these questions with a cross-sectional quantitative study, using data collected for the JATKIS-project, funded by the Finnish Institute of Occupational Health. The project focuses on investigating the careers of older employees. Data were collected during the spring of 2016 at the Kuopio University Hospital from 962 nurses aged 50 or over. Of all



the nurses that received the questionnaire, 396 responded to the survey, with a response rate of 41 percent. Data will be analyzed with descriptive statistics, analysis of variance (ANOVA), correlations and a regression analysis to best achieve a coherent image of the data and the associations within.

### **1.3 Structure of the study**

This study consists of five sections: introduction, theoretical framework, methodology, results and discussion. After discussing the challenges faced by organisations nowadays, especially from the perspective of older nurses and the field of health care, I will now continue to the theoretical framework of this study. I will start by introducing the conceptualization of key terms and definitions, such as older employees, work ability, organisational practices, and resilience. I will continue to the theoretical foundations of resilience, such as the positive psychology framework and the concept of psychological capital, and the theoretical approach of this study. Finally, I will discuss the development of resilience research, previous research on individual resilience and resilience-enhancing practices. Resilience enhancing practices include practices related to work-related factors, organisational practices and managerial practices, as well as practices focused on older employees at work.

Then, I will continue to the methodology section by introducing the key measures, the research method, data collection and the participants. Next, I will introduce the analysis of this study and examine the results. I will introduce descriptive statistics, the results of the variance analysis, correlations and finally, results of the regression analysis. Finally, I will continue to discussion and conclusions. In this section I will examine the results in light of previous research and the challenges posed by aging and the demands of the health care industry. I will also discuss the limitations of this study and suggestions for future research.

## **2. THEORETICAL FRAMEWORK**

### **2.1 Key concepts and definitions**

The key concepts of this study include the definitions of older employees, work ability, organisational practices and resilience. I will first define older employees by reviewing how it has been defined in previous studies, what kind of different conceptualizations can be used and finally discuss how older employees are defined in this study. Then, I will introduce the definition of work ability. Next, I will continue to discuss organisational practices, how they are defined in previous studies, what kind of practices they usually include and what kind of organisational practices are included in this study. Finally, I will continue to resilience and introduce a brief history of how it has been conceptualized and researched through the years, and discuss how it has been defined in previous studies. In addition, I will discuss closely related definitions and differentiate them from the construct of resilience.

#### **2.1.1 Older employees**

Older employees have been conceptualized in very different ways across studies, defining the threshold from 40 to as high as 70. The World Health Organisation (WHO) has defined older employees as those aged 45 and over (Brough, Johnson, Drummond & Timms, 2011). Usually, however, in studies concerning their participation in the labour market, older employees are referred to as those aged 50–55 (Armstrong-Stassen & Cattaneo, 2010; Hennekam, 2015; Herrbach et al., 2009). This threshold is due to the decline of the labour market participation among this age range. Some researchers studying older employees in organisational settings have defined their age a bit lower, to a range of 40–45. (Kooij, Lange, Jansen & Dijkers, 2008.) This threshold has been justified with work ability and different career-related reasons (Ilmarinen, 2006; Salminen et al., 2016).

However, it has also been proposed that the chronological age of an individual is an inadequate operationalization of age in a work environment. Ageing is defined as the changes that occur in psychological, physical and social functioning over a period of time; thus, affecting each individual differently on all levels of life, including individual, organizational,

and societal levels. The health, career stage, and family status of individuals may differ drastically, even though they might have the same chronological age. Therefore, only one singular definition or conceptualization is not enough to explain age and the changes that come within. (Kooij et al., 2008.)

Five different approaches have, therefore, been suggested for defining age: (1) chronological, (2) functional, (3) psychosocial, (4) organisational, and (5) the life-span concept of age. Even though all these conceptualizations differ in terms of how age is defined and perceived, they are seen to be interrelated. (Aaltio, Salminen & Koponen, 2014; Kooij et al., 2008.) Other conceptualizations of age in research settings include the division to subjective, social and relative age, which has an innate social dimension (Kooij et al., 2008). In this study, however, I will focus on the chronological age of employees, defining the threshold for older employees to those aged 50, according to the definition of the Organisation for Economic Co-operation and Development (OECD, 2006).

### **2.1.2 Work ability**

Work ability concerns an employee's ability to conduct their work, thus, having both the professional competences and the needed health to conduct work tasks (Airila et al., 2014). Perceived work ability is conceptualized as an individual's experience of work-related demands and their capacity to deal with these demands. It is also defined as an employee's ability to conduct their daily work and it is measured through comparing their individual resources in regards to work-related demands. Individual resources consist of physical, psychological and social resources, in addition to interpersonal factors, such as motivation, competencies, education, attitudes and values. The level of work ability of an individual is defined by comparing these individual resources to both physical and psychological work demands. Work ability is seen as constantly changing throughout one's career. Changes in work ability are caused by aging, rearrangements in organization of work or in the nature of work and by changes in organisational practices or available tools. (Ilmarinen, 2001.)

Work ability is affected by both individual resources and the qualities of the work environment. Overall wellbeing, professional competencies and willingness to work have been associated with good levels of work ability. (Reina-Knuutila, 2001.) Work ability has, in addition, been found to depend on education, organisational commitment, organisational

climate and relationships with colleagues and support from managers (Ilmarinen, 2001).

### **2.1.3 Organisational practices**

Organizational practices are defined as the typical style and habits of an organisation for carrying out everyday activities and functions. These styles and habits are seen to have evolved over a period of time and are influenced by the organization's people, actions, interests and history; thus, reflecting the organization's culture and climate in the practices as well. (Kostova & Roth, 2002.) Central to organisational practices are people's actions and how their attitudes and ways of perceiving the world are reflected in the practices. Organisational practices are crucial for the ongoing operations of an organisation. (Feldman & Orlikowski, 2011.)

Even though organisational practices arise collectively from the organisation as a whole, HR practitioners have the main responsibility in an organisation to design and implement these practices. However, line managers as well have a responsibility to implement the intended practices and senior line managers have even a more crucial role, since they are the ones deciding about future investments in HRM. For the effectiveness of an organisation, HR practices must be in place, they must be perceived as effective from both managers and employees and finally, they must also be implemented effectively. Strong HR systems have been associated with higher performance on an organisational level. (Guest & Conway, 2011.) An HR system is defined as a multilevel construct including the principles, programs, policies, design and philosophy of an organisation and its HR function. Through the HR system, employees are informed and signalled of what is expected of them, such as how they should act with other employees, what they should concentrate on and what behaviour is rewarded. In a strong HR system, information is understood and interpreted as intended by employees, thus, guiding their behaviours and actions according to the intended goals. (Lengnick-Hall et al., 2011.)

HRM is defined as a reciprocal system between the employee and the organisation, in which information and effort is exchanged. HRM aims to attract, train, motivate, and retain employees, who on their behalf guarantee the effectiveness and endurance of the organization. If the organisation prioritises wellbeing-focused HR practices, employees will in return respond positively, reflecting in overall performance. (Guest, 2017.) HR practices include

recruitment and selection, training and development, assessment, compensation, communication, job design, and finally quality and involvement (Guest & Conway, 2011). Furthermore, HR practices aim to affect employees attitudes and behaviours (Nishii, Lepak & Schneider, 2008); these practices include, for example, strengthening employees' job satisfaction, commitment and enhancing the organisational culture overall. In addition, HRM functions aim to align themselves with the organization's strategic objectives by maintaining good personnel structure, developing needed skills and abilities, and maintaining labour costs adequate. (Wang & Shultz, 2010.)

On average, individuals spend over a third of their life at work, thus, health promoting practices are crucial for the wellbeing of employees and consequently to the success of an organisation. Work-related wellbeing is defined as a comprehensive set of characteristics of an employee, related to their functioning and experiences in the work environment. (Guest, 2017.) Organisations are increasingly focusing on health and wellbeing-enhancing organisational practices and world widely employees are offered an extensive amount of different programs designed to maximize wellbeing. However, five general categories of wellbeing-enhancing organisational practices can be found: (1) work-life balance (2) employee development (3) safety and health (4) recognition and appreciation, and (5) employee involvement. Organisational practices and policies should aim to achieve and maximize overall employee wellbeing through these five categories of practices. Previous literature also suggests that for the designed organisational practices to achieve the desired outcomes, the effectiveness of communication within the organization is crucial. (Grawitch, Gottschalk & Munz, 2006.)

Many of these wellbeing enhancing practices, however, have been criticized to be more performance-focused rather than wellbeing-focused, thus, benefitting more the organization than the employee. Therefore, a more wellbeing- and individual-focused approach has been suggested as well. From this perspective beneficial practices include: investing in employees through development and building individual strength and skills, employee support and mentoring, providing engaging work and possibilities to job design, positive social and physical environment, supportive management and good communication throughout the organization. (Guest, 2017.)

These wellbeing related practices have also been described as high-involvement work

practices (HIWP) and are defined as a set of organisational practices that aim to enhance involvement, empowerment, trust, development, teamwork, transparency and performance-based compensation. These practices have been associated with quality, increased productivity, and job satisfaction as well as organisational performance. Research has shown that HIWP, especially in the health care sector, are associated with increased job satisfaction. (Harmon et al., 2003.) HIWP have, in addition, been significantly associated to the retention of employees. Implementing these practices reflects an appreciative attitude towards employees and a view of employees as a valuable asset vital to the organisation's success and performance. (Guthrie, 2001.)

Perceived organisational and HR practices have been defined as how individuals experience and interpret actual and objective organizational HR practices. Thus, the perceived and actual HR practices might differ from each other since other factors may change how they are perceived. (Armstrong-Stassen & Schlosser, 2010; de Lange, Kooij & van der Heijden, 2015.) For HR practices to achieve their intended goal and desired outcomes, they must also be perceived as how they are intended; thus, the perception of and the attributions given to the practices are crucial for their success. Therefore, it is essential for empirical studies to focus on employee's perceptions rather than just on actual HR practices. (Nishii et al., 2008.)

Previous studies on resilience and organisational practices differ regarding their level of perspective. Some studies adopt an organisational level perspective and analyses actual HRM practices, whereas some apply an employee-level perspective by examining employee experiences of perceived HRM practices. (Salminen et al., 2016.) Investigating organisational practices by relying mainly on reports from managers and supervisors has been a dominant approach in HRM research. However, these practices are more likely to reflect the intended practice, instead of the actual practices and how they are perceived and experienced by the employees on a practical level. (Kehoe & Wright, 2010.) Thus, it is essential to assess the employees' experiences of organisational practices, instead of only assessing intended use or the implementation of those practices (Bardoel et al., 2014). This study adopts an employee-level perspective and relies on employees' self-reports on their experiences, to better understand how the implemented organisational practices are experienced and perceived by the participants. Thus, it might be assumed that results will reflect a more genuine perspective of the organisational practices and how they are perceived.

#### **2.1.4 Resilience**

A wide literature review on the research of resilience demonstrates that scholars have proposed 104 definitions of resilience. The review demonstrated that these definitions vary on whether they emphasize (1) general individual abilities (2) adaptation to adversities or (3) demonstration of positive changes after adversity. (Meredith, Sherbourne, Gaillot, Hansell, Ritschard, Parker & Wrenn, 2011.) In addition, resilience has been viewed as a general occurrence of normal human adaptation processes (Bardoel et al., 2014). Previous research on resilience has established that both contextual and individual characteristics influence one's level of resilience (Luthans et al., 2006). Furthermore, research has shown that resilience can be demonstrated either proactively or reactively, thus, it can be defined as either resistance to as well as a response to adversities and stressors (Bardoel et al., 2014).

Most conceptualizations of resilience, however, highlight the capability to “bounce back” and recover fast from stressful and challenging life events (Bardoel et al., 2014; Bonanno, 2004; Linnenluecke, 2017; Shin et al., 2012; Turner, 2014). The word resilience itself originates from the field of metal research and is related to a metal's ability to withstand pressure by absorbing energy without deforming (Hatler & Sturgeon, 2013). In organization and management research, resilience has mainly been conceptualized as the ability to withstand conditions of significant stress and change (Linnenluecke, 2017). However, the current conceptualization of resilience suggests that resilience involves not simply surviving a situation, but thriving in spite of adversity (Hatler & Sturgeon, 2013). In addition, resilience has been conceptualized as to be actively prepared to confront adversities, which requires readiness to act with no knowledge or certainty of future events (Vogus & Sutcliffe, 2007).

Adverse life events have been operationalized in previous studies as disruptions and unexpected changes in an individual's everyday life and routines. In addition, it refers to those physical, mental or social losses that limit one's circumstances and opportunities, such as deaths or illnesses of loved ones, one's own poor health or conditions related to retirement or older age employment. How people interpret events is essential to how they respond, which emphasizes the need to understand especially the meaning of adversities and how they are experienced. (Hildon et al., 2008.) In this study, I aim to investigate how common it is for older nurses to experience adversities in life and especially, what kind of adversities they face.

Resilience has been defined as a response where an individual: (1) has faced major adversities, (2) adapts positively, and (3) keeps functioning normally (Bonanno, 2004). Resilience has been described as a choice to navigate through and overcome adversities by finding the resources needed to survive, while maintaining personal and occupational wellbeing (Cope et al., 2016). The current conceptualization of resilience has indeed a focus on individual motivation to cope with adversity and includes the notion that this capability to recover is achieved through past experiences and cognitive processes. Previous research has found a large amount of positive individual factors contributing to increased resilience, including optimism, creativity, humour, intelligence, sensemaking, a consistent life narrative, and appreciation for both oneself and others. (Turner, 2014.)

An important dispute within resilience research concerns whether the construct is conceptualized as a trait, or as a process. When resilience is perceived as a trait, the definition concerns a variety of characteristics that are seen to enable adaption to encountered situations in life. Resilience research and literature have identified numerous characteristics related to resilience, such as hardiness, extraversion, self-efficacy, positive emotions, self-esteem and positive affectivity. When resilience is perceived as a process, it is seen as a dynamic process that changes over time, including positive adaptation when facing major adversities. In addition, viewing resilience as a process includes both contextual and situational factors; if circumstances change, resilience alters, thus, individuals may react differently to adversity in different situations across their lifespan. Findings also suggest that resilience is an ability that develops over a period of time through different contexts in life, and through interactions between contexts and environments. (Fletcher & Sarkar, 2013.)

Personality-based resilience studies have conceptualized traits possibly related to resilience in at least three different ways: (1) single trait models conceptualizing resilience as a singular and separate trait, (2) composite trait models conceptualizing resilience as a group of multiple traits, and (3) comprehensive taxonomies such as the five-factor model (FFM). These models assume that resilience is a general quality demonstrated rather consistently across numerous contexts in life and that the level of resilience varies on a continuum from high to low resilience, with vulnerability at the lower end. (Britt et al., 2016.) However, personality traits explain only a small amount of variance in health outcome research; thus, many other factors are seen to contribute to one's positive adaptation to adverse or stressful events (Bonanno, 2004).



A popular example of the conceptualization of resilience is hardiness, which is defined as a personality trait consisting of commitment, control, and challenge, acting as a buffer when facing adversities and challenging life events. These characteristics shape how individuals perceive events in their lives. Commitment is related to the ability to find meaning, purpose and value in life and to one's efforts and sacrifices. Challenge is concerned with an inclination to interpret challenging events as opportunities for interpersonal growth, rather than threats. Control is related to the belief that one is capable to affect the world in positive ways through their actions. Hardiness is also viewed as a developable characteristic. (Britt et al., 2016; Maddi, Harvey, Khoshaba, Lu, Persico & Brow, 2006.) Even though hardiness is frequently associated with resilience, it is viewed more as a psychological style or attitude as compared to resilience which is viewed more as a response to or even as the process of coping with stressors and adversities in life. Both constructs, however, have been associated to enhanced wellbeing and performance and are important factors preserving resources during adverse life events. (Salehi & Besharat, 2010.)

Flexibility and adaptability have also been closely related traits to resilience. However, resilience is triggered by an unpredicted event, whereas flexibility and adaptability are viewed as competences to adapt to on-going situations. In addition, resilience emphasizes development and dynamic change from an inside-out perspective, while the two other constructs are viewed to require an outside-in environmental fit aiming towards a new externally determined equilibrium. (Lengnick-Hall et al., 2011.)

Resilience has also often been closely aligned to coping and recovery, since all these three constructs are universally believed to result from general human adaptation. However, resilience is viewed as the capacity of an individual to preserve equilibrium and a good level of functioning, whereas the definition of recovery and coping include a loss of functioning and consequently a gradual return to normal performance after an adversity. (Feltcher & Sarkar, 2013; Lyons et al., 2015.) Previous literature has also proposed that resilience is the process of dealing with adversities and stressors in a way that result in the reinforcement of resilient characteristics. Furthermore, resilience affects how an event is assessed, whereas coping regards the strategies used only after the assessment of an adversity. Therefore, it is useful to conceptualize resilience as a response not only to experienced trauma but also to perceived adversities, thus, also guiding the choice of coping strategies. Although resilience and coping are often been closely aligned and even used interchangeably, there is growing

evidence suggesting they are separate constructs. (Fletcher & Sarkar, 2013.)

One way of conceptualizing resilience is through trajectories, by examining the process of how soon or to what extent individuals recover from adversities. However, some scholars have argued that this approach characterizes recovery rather than resilience, since the general view of resilience assumes that resilient individuals do not need to recover since they do not demonstrate any significant decrease of functioning in the first place. (Bonanno, 2004.) On the other hand, both individuals who recover faster from adversity and individuals who demonstrate enhanced functioning against adversity can be viewed as to be resilient. This issue of what specific trajectory reflects resilience hinders its study. (Britt et al., 2016.)

Another close concept that should be differentiated from resilience is career resilience. Career resilience has been conceptualized as the ability to maintain equilibrium when facing career adversity and as a strategy to cope with rejection in the increasingly competitive workforce market where competition for positions is extremely high. (Moffett, Matthew & Fawcett, 2015.) In addition to coping with career adversities, the concept of career resilience includes those means aimed to enhance one's career, for example by investing in a variety of different activities, such as cultivating and maintaining an active professional network. Furthermore, it has been viewed to include perceiving oneself as an adaptable and intelligent problem-solver, rather than to have a more narrow expertise, thus, increasing one's perception of possibilities to advance in their career. (Fiske, 2009.) Career resilience differs from resilience as being relatively more specifically focused on career building and one's abilities to enhance their career rather than a more comprehensive view of individual resilience, which includes both work-related and non-work related circumstances. In this study, career resilience is excluded as a definition of resilience, since I am interested in the more comprehensive display of individual resilience across all contexts in life.

In this study resilience is defined by the most popular definition, regarding the ability of bouncing back from adversity (Bardoel et al., 2014; Bonanno, 2004; Linnenluecke, 2017). In addition, resilience is conceptualized through the construct of psychological capital (PsyCap), which is a core construct of the positive psychology movement (Britt et al., 2016). Through this theoretical approach it is conceptualized as a state-like, developable construct, thus, trait-related definitions of resilience are excluded from this study. Also excluded is the notion of resilience trajectories, since they are not possible to investigate in the realm of this study.

## **2.2 Theoretical approaches to resilience**

During the last thirty years, multiple different theories of resilience have been suggested; however, numerous common characteristics can be identified across the different theoretical approaches. Most of the theories conceptualize resilience as a dynamic process that develops and transforms over a period of time, with a variety of interacting factors determining whether resilience is demonstrated or not and to what extent. However, the emphasis on what specific factors predict or explain resilience varies across the different approaches. Furthermore, even though most of the theories view resilience as the most desirable outcome, some approaches include other positive outcome factors as well, such as coping, job satisfaction and productivity. Therefore, many theoretical approaches to resilience often encompass a variety of closely related psychosocial constructs, and consequently, the research of resilience overlaps with other research areas as well. (Fletcher & Sarkar, 2013.) Resilience is usually conceptualized through the construct of PsyCap and there are two common theoretical approaches to resilience of employees: the positive psychology perspective and conservation of resources (COR) theory (Bardoel et al., 2014).

### **2.2.1 Resilience as a component of psychological capital (PsyCap)**

The most popular example of the conceptualization of resilience as a singular individual characteristic is the view of resilience as a component of PsyCap (Britt et al., 2016). PsyCap is conceptualized as a positive psychological state of development, thus, viewed more as a state than a trait, and consequently, as being susceptible to change (Dawkins, Martin, Scott & Sanderson, 2013). Furthermore, PsyCap is described on an individual level as a state comprising of resilience, self-efficacy, hope, optimism and confidence (Luthans, Avolio, Avey & Norman, 2007). In addition to these constructs, PsyCap have been associated with a variety of other beneficial social capabilities, such as gratefulness, forgiveness, authenticity, courage, emotional intelligence and spirituality. However, it has also been argued that PsyCap itself is a core construct predicting satisfaction and performance per se. (Toor & Ofori, 2010.)

PsyCap has become an important and greatly investigated construct in leadership research and it is argued that its development in organizations helps them gain competitive advantage. PsyCap is also seen to serve as an important HRM strategy. (Toor & Ofori, 2010.) Research

has indeed found a range of positive associations between PsyCap, overall wellbeing and organizational performance (Avey, Reichard, Luthans & Mhatre, 2011). In addition, research has demonstrated that PsyCap correlates positively with job satisfaction and organizational commitment, and negatively with cynicism, work-related stress and deviance (Dawkins et al., 2013).

In the context of PsyCap, resilience is typically defined as the ability to adapt to significant change and adversity (Luthans et al., 2007). When viewing resilience as a component of psychological capital, it is important to differentiate it from close constructs such as hope, optimism and efficacy (i.e. confidence). Resilience is the capacity to respond and even thrive in face of significant adversity or stress. Hope instead, is defined as the determination and the waypower people have toward a goal. Determination concerns having positive expectations and particular goals, whereas waypower refers to having multiple ways of coping with expectancies or goals that do not proceed as planned. Hope is seen as a construct pushing individuals persistently toward goals, and redirecting them when necessary. The waypower dimension resembles resilience in regards to flexibility, that is an important component of both constructs, but the main difference is the lack of reaction to adversities in the construct of hope, which is the main trigger of the resilience process. (Luthans et al., 2006.)

Optimism instead, is not as related to resilience as hope and it is conceptualized as a positive attitude towards personal succeeding in life now and in the future. Optimism also comprises of a more general expectancy of positive outcomes in life, leading to persistence in working towards goals. Optimists generally explain good outcomes in life as their own merit and deflect from responsibility regarding negative outcomes with optimistic explanatory. As with hope, to show optimism there is no need for a trigger event, like an adversity, as does the construct of resilience. Resilient individuals might be better prepared to overcome challenges than optimists, since optimists might simply brush off the negative outcomes instead of trying to explain or understand the experienced adversities. Furthermore, resilient individuals may have a more practical or strategic approach towards adversities, thus, being better equipped to adapt to, rise above or even thrive regardless of stressors. (Luthans et al., 2006.)

Efficacy concerns the personal belief of an individual of their successfulness and the confidence to face and overcome challenging tasks. Confident individuals are more likely to have a pathway towards resilience, through which an adversity or failure is framed as a

learning experience or as a possibility for growth. Thus, the proactive and process-focused view of resilience relies greatly on the concept of efficacy. Resilience allows individuals to maintain their self-efficacy and motivation to pursue goals, even after they have been challenged due to adversities. (Luthans et al., 2006.)

### **2.2.2 The positive psychology framework**

The positive psychology framework is the most common theoretical approach to resilience of employees (Bardoel et al., 2014). Positive psychology and the construct of PsyCap, and its four sub-constructs, resilience, self-efficacy, hope and optimism, have gained increased attention during previous years (Dawkins et al., 2013). Especially resilience has become one of the main constructs investigated among the positive psychology scholars, who aim toward a more positive perception of psychology. This branch of psychology focuses on wellbeing and resources, rather than the common disorder-based view of psychology. (Luthans et al., 2006; Lyons et al., 2015.) Positive psychology view individuals as self-organizing, self-directed and adaptive entities and all characteristics related to the flourishing of an individual, such as optimism and a positive mindset, can be seen either as trait-like or state-like. (Seligman & Csikszentmihalyi, 2000.)

The positive psychology framework seeks to enhance the quality of life of individuals with a focus on positive individual characteristics and on features that make life enjoyable and meaningful; thus, also concentrating more on prevention than repairing. Positive psychology scholars are of the opinion that psychology has for too long focused on repairing damages within a disease-focused framework of individual functioning. They suggest that this focus on pathology neglects those factors leading to a fulfilling life and to a thriving and flourishing individual. Positive psychology aims for a change from a focus on preoccupation and repairing negative aspects in life, towards a shift to building and reinforcing positive individual characteristics. (Seligman & Csikszentmihalyi, 2000.) The positive psychology movement is based on strong beliefs that more focus should be put towards promoting the good in both individuals and organizations, thus, highlighting the importance of employee abilities to develop and enhance resilience (Linnenluecke, 2017).

In previous research the positive psychology framework have consisted of at least four different contexts and research orientations: (1) the evolutionary perspective, (2) positive

personal traits, (3) the mental and physical health approach, and (4) the fostering excellence approach. The evolutionary perspective emphasizes the misfit between the rapidly changing environment and individuals' bodies and minds, which have not changed as fast or in the same way as our environment. The evolutionary perspective emphasizes individual development in harmony with global evolution. The positive personal traits perspective focuses on a set of individual traits, such as subjective wellbeing, optimism, happiness, and self-determination. Resilience falls under this branch of research as well. The mental and physical health approach aims to shift the way mental and physical illnesses are viewed and perceived, with a life-span approach concentrating on functioning, solutions and positive emotions instead of pathology. Finally, the fostering excellence approach regards the notion that improving human conditions calls for more than just helping the suffering, but also helping normally functioning individuals reach a more fulfilling existence. This approach concerns notions such as wisdom, giftedness and exceptional performance. (Seligman & Csikszentmihalyi, 2000.)

The positive psychology framework suggests that resilience is a learnable, developable and measurable ability that determines an employee's way of coping with changes and adversities, thus, affecting whether they will fail or succeed, independent of their actual capacity to deal with adversities. Through this framework organisations are viewed as capable of building and developing resilience, and thus, improving employees' capabilities to address changes and risks in the work environment. (Linnenluecke, 2017.) Therefore, the perspective of positive psychology offers a theoretical foundation for the belief that several HRM practices can affect, strengthen and develop employee resilience, thus, leading to favourable outcomes for both individuals and organisations (Bardoel et al., 2014).

### **2.2.3 Conservation of resources (COR) theory**

The COR theory highlights the importance of individual resources to withstand adversities and stressors in life and their key role in shaping individuals' reactions in life. According to the theory, individuals tend to perceive the world as inherently threatening and demanding, thus, holding a wide amount of personal strengths and social connections to survive. (Shin et al., 2012.) COR theory was developed to incorporate a number of stress related theories to form a general theory of psychological stress. Thus, COR theory is commonly used in literature and research concerning stress, but it has also been applied in the literature and

research of other psychological constructs, such as resilience, motivation, organisational commitment and decision making. The current wave of resource theories emphasizes both positive psychological processes and active purposeful actions, instead of passive coping responses. (Gorgievski, Halbesleben & Bakker, 2011.)

Resources concern those personal characteristics, items, circumstances or energies that individuals value and strive to obtain and maintain, or as those that serve as means for requiring valued resources (Gorgievski et al., 2011; Wright & Hobfoll, 2004). Three main categories of resources are identified as significant for individuals: (1) instrumental resources, acting or serving as instruments or means to gain resources, such as money, time or shelter, (2) social resources, such as relationships, support or status, and (3) psychological resources, referring to the mind and emotions, such as self-esteem or health. The theory is based on the notion that individuals aim to preserve, protect, and develop resources and that the fear or actual loss of these resources is a threat for the individual. (Bardoel et al., 2014.) Therefore, it is the perception of resource loss that acts as a trigger for employees to strive to preserve or acquire resources. Individuals are seen to react to perceived resource losses in two different ways: (1) utilizing the maintained resources to restore lost resources or pursue gaining new resources, or (2) by withdrawing effort to protect maintained resources. (Kiazad, Seibert & Kraimer, 2014.) Through the lens of COR theory, resilience is viewed as an individual psychological resource (Bardoel et al., 2014).

According to the theory, stress occurs when resources are diminished or threatened (Shin et al., 2012). Thus, protecting oneself against resource losses is more beneficial than gaining resources. Through this notion, the theory explains why negative work-related factors such as job strain and job insecurity cause acute distress and leads to negative outcomes such as burnout. However, it also explains the significance of resilience-enhancing practices. Employees must be both willing and able to preserve the valued resources. (Wright & Hobfoll, 2004.) It is suggested in terms of the COR theory that employee resilience as a resource should be build up in organisations especially before organisational changes (Shin et al., 2012). Nevertheless, the theory also argues that resilience is a valuable resource despite of organisational change, since life outside of work is likely to be turbulent. Thus, enhancing employee resilience still benefits individuals. (Bardoel et al., 2014.) According to COR theory, individuals who own a wide amount of resources are less susceptible to the loss of resources and are more able of acquiring further resources for the future, than individuals with

fewer resources (Shin et al., 2012).

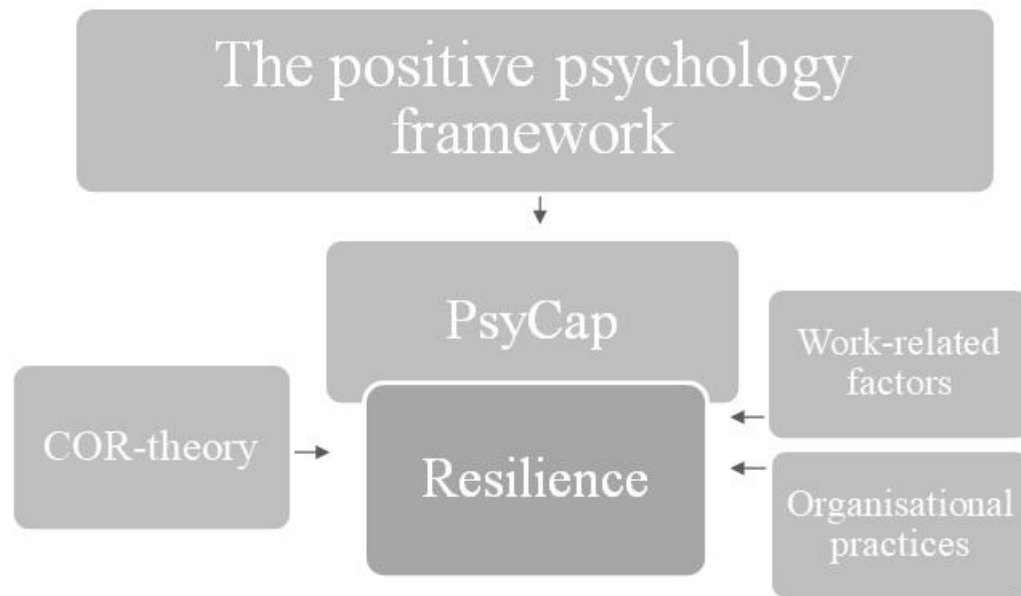
The theoretical perspective of COR-theory is included in this study's theoretical approach, because focusing on resources has fundamental value in work and occupational research. The active pursue to acquire and increase resources motivates employees; thus, resources form a great foundation for optimal performance and thriving in the work environment. Emphasizing resources as an element of a larger dynamic process offers a broad theoretical framework for a positive psychological approach. (Gorgievski et al., 2011.)

#### **2.2.4 The theoretical approach of this study**

This study focuses on the positive psychology work regarding employee strengths. Resilience is conceptualized within the positive psychology framework as a psychological state of an individual. Resilience is defined as the ability to adapt to and “bounce back” from significant changes and adversities. An adversity is viewed as essential for triggering the resilience process. In addition, this study understands resilience as a component of PsyCap, thus, as an individual's positive psychological state that can be enhanced and developed. This study also incorporates the theoretical perspective of COR theory, through which resilience is perceived as a valuable resource to be both nourished and developed.

Resilience is viewed as a developable characteristic that should be nourished and enhanced both in the work environment and in non-work-related contexts. However, resilience is conceptualized here as a general quality demonstrated in a rather consistent level across several domains in life. A summary of the theoretical approach of this study is displayed in Figure 1. The figure summarises the theoretical approach of this study by positioning resilience as a component of PsyCap and in the framework of positive psychology. In addition, COR-theory is taken into account as the theoretical approach to resilience. Work-related factors and organisational practices are included in the figure as well, to enhance the importance of resilience-enhancing practices and to emphasize the view that resilience is a developable resource.





**Figure 1** A summary of the theoretical approach of this study

### 2.3 Development of resilience research

The research of resilience aims to comprehend why and how some individuals are capable of enduring and even flourishing in face of experienced life adversities. Three different waves have been recognized among resilience research. The first wave consisted of a pursuit to classify the characteristics of individuals who respond positively to difficult circumstances and situations in life. The second wave of research focused on examining resilience through the context of dealing with stressful events, adversities, changes, or opportunities. (Fletcher & Sarkar, 2013.) In addition, it focused on examining the possibilities to develop and build resilience (Hildon et al., 2008). The third wave of research pursued to identify those motivational forces that lead individuals and groups toward self-actualization in life. (Fletcher & Sarkar, 2013.)

Among business and management research, the study of resilience has developed into different research streams conceptualizing resilience quite differently. Resilience has been defined and operationalized in very different ways across studies with different research streams using and developing own definitions, conceptualizations and theories of resilience. However, similarities and differences between the conceptualizations of resilience have not

been explored, and no insight has been collected on potential generalizable principles for defining resilience. (Linnenluecke, 2017.)

Resilience scholars have currently started to focus on examining ways to build and improve resilience over time, through for example training and interventions. Current studies on this topic include resilience-enhancing practices in different cultural contexts and organisational settings, such as in family firms. In addition, the impact of developing resilience has been examined against employees' attitudes, actions and performance, such as attitudes towards organizational change and leadership behaviours. (Linnenluecke, 2017.)

## **2.4 Resilient employees**

Resilient employees are found to be proactive learners who learn from their successes and aim to be innovative, more creative and getting things done. In addition, they are found to be more focused on their strengths rather than their weaknesses and making the most of the here and now. Through the lens of resilience, these strengths are viewed as learnable and developable qualities rather than fixed traits. (Cope et al., 2016.) Furthermore, research has shown that resilient employees are better suited to deal with changes in the work environment (Tugade & Fredrickson 2004). However, resilience does not seem to predict a more positive view of changes in the work environment, but rather better adaptation toward changes, regardless of whether these employees are pleased or not with the change (Bardoel et al., 2014).

Resilient employees are also found to be focused on constant learning, self-management and adaptability; thus, they are regarded as a competitive advantage for organisations, especially ones competing in the global economy (Lyons et al., 2015). Resilient employees make the organisation itself become resilient (Bardoel et al., 2014). Previous research on resilience has, in addition, found numerous traits to be associated with resilience, including positive emotions and affect, hardiness, extraversion, self-efficacy and self-esteem (Fletcher & Sarkar, 2013). Furthermore, resilient individuals have been found to demonstrate self-discipline, greater problem-solving skills, determination and perseverance, critical thinking skills, humour, and a pleasant and social attitude toward others (Lyons et al., 2015).

Due to the highly demanding environment of health care, resilience has been found to be a

vital quality for nurses, especially regarding nursing longevity and retention. Research has shown that resilient nurses have higher resistance to work-related stress and are more likely to work for longer as healthy nurses. (Airila et al., 2014.) It is a particularly important construct to understand, especially for nursing management and leaders, to improve and enhance the wellbeing of nurses and the nursing industry, since nurses face daily challenges that require high levels of resilience (Turner, 2014). Resilience has also been found to be associated with good levels of work ability among nurses, although the association is mediated by commitment (Airila et al., 2014). In addition, resilience has been found to be essential to the willingness and capacity of maintaining a good level of work ability (Day & Gu, 2009). However, the relationship between resilience and work ability warrants more research, since it is under researched, especially regarding the retention of older employees.

One study on nurses working with cancer patients, which is perceived as very stressful, demonstrated that these nurses showed good levels of wellbeing and even lower amounts of distress and burnout than in other fields. Many factors were found to mediate these results, like commitment and a sense of purpose, but resilient nurses were found to maintain an even better sense of wellbeing. This finding is explained by their response and adaptation to change. High levels of resilience were found to be efficient in buffering and moderating the stressful effects of working in palliative care. (Ablett & Jones, 2007.)

Numerous studies have emphasized the importance of adversities to trigger resilience but it has also been found that resilience can be developed through adversities. Research shows that individuals who have encountered multiple adversities in their lives have grown to cope better with future adversities and have learned a variety of skills to cope with adversity. In addition, the process of constructing and reinterpreting past events, especially adversities, has been found to be essential for developing resilience. This process allows individuals to maintain a sense of identity and to shed light on the significance of experiencing adversities. This process is found to increase acceptance and help individuals distance themselves from the emotional strain of adversity. This is also one of the explanations of why older age increases levels of resilience. (Hildon et al., 2008.) This also explains the high resilience levels of older nurses, since they have been coping with a stressful work environment for a long time, thus, having learned to cope with work-related adversities.

Furthermore, resilient individuals are found to be capable of drawing on both social and

personal resources to confront and cope with adversity, relying, for example, on supportive relationships, which have been found to alleviate daily stress. Therefore, having access to reliable social networks at work and having effective coping strategies are found to be extremely important to show resilience. It has also been argued that a fair amount of stability combined with social support and positive coping strategies are essential for the process of transforming ongoing adversities into neutral experiences. (Hildon et al., 2008.)

Studies have, in addition, demonstrated that older individuals are at least 3 times more resilient than younger individuals (Bonanno et al., 2007). Older employees approaching retirement age show better emotional regulation than younger employees after negative events, such as high workload or work–family imbalance (Carstensen, Isaacowitz & Charles, 1999; Mauno, Ruokolainen & Kinnunen, 2013). However, younger nurses report higher vigour and job satisfaction in times of high job insecurity compared to older nurses. This finding might be explained by the notion that employees who are highly dependent on their current employment are more vulnerable, and thus, suffer more from job insecurity; older employees, in particular, are assumed to be more dependent on their current employment. (Mauno et al., 2013.) Thus, studying resilience among older employees is crucial for their wellbeing at work especially in these highly unpredictable times.

## **2.5 Resilience enhancing practices**

In this section I will introduce previous research and literature on resilience-enhancing practices. I will first examine enhancing resilience through work-related factors, such as employee activities, strengths and characteristics. Next, I will discuss resilience-enhancing organisational practices and the role of managers and supervisors in enhancing resilience. Finally, I will shortly review age-related practices for enhancing resilience among older employees.

### **2.5.1 Enhancing resilience through work-related factors**

Previous research has shown that resilience can be built and developed through purposeful practices focused on strengthening work-related factors, such as improving self-efficacy and developing employee strengths. Employee empowerment has, for example, been found to lead

to increased employee resilience. Resilience building programs have also been found to increase individuals' job satisfaction, thus, suggesting a strong connection between job satisfaction and resilience. (Lyons et al., 2015.) Previous research has indeed found a significant connection between job satisfaction and resilience (Matos et al., 2010). Thus, resilience can be enhanced by taking care of employee job satisfaction as well. In addition, the significant connection between work ability and resilience (Day & Gu, 2009) implies that taking care of work ability among employees would also enhance resilience.

A study on Australian nurses focusing on employees' own practices at the workplace found eight resilience-enhancing activities within their resilient participants: self-management, a positive mind-set, taking on challenges, valuing social support, acting kindly towards others, a passion for the profession, growing through encountering adversities and respectful shared leadership. In their study, resilient nurses showed personal optimism, hope, adaptation and ability to navigate through challenges and adversities. (Cope et al., 2016.)

In addition, another study on resilience among long-term care nurses showed that professional expertise, purposefulness, an optimistic mindset and high work-life balance were significant predictors of resilience. Furthermore, research has shown that qualities related to nursing resilience include problem-focused behaviour, strong commitment to the profession, positive coping strategies, a pursue towards making a difference, high job satisfaction and acknowledging personal and occupational boundaries. (Turner, 2014.) From an organisational point of view, HR units should aim to reinforce these work-related factors among their employees to enhance resilience.

Several employee counselling or coaching services providing training or coping strategies have also been found to be beneficial for enhancing resilience (Bardoel et al., 2014; Turner, 2014). Furthermore, HR practices should focus on developing expertise, creativity, decisiveness in spite of uncertainty, questioning fundamental assumptions, and problem-solving through novel and appropriate solutions (Lengnick-Hall et al., 2011). Research on resilience among nurses has, in addition, identified that building emotional insight and coping strategies, becoming reflective, as well as achieving balance in life, are important factors for encountering challenges of the health care industry (Turner, 2014).

Resilience research has, in addition, argued that individuals are more resilient in the

workplace when having genuine involvement, or when feeling empowered (Bardoel et al., 2014; Lyons et al., 2015). Organizational commitment has indeed been considered a key indicator in understanding employee behaviours and as being a strong predictor of job satisfaction (Kim et al., 2016). Lacking support or appreciation in the work environment has been found to diminish both resilience and commitment, decrease experiences of job fulfilment and enthusiasm and to lead to an increased sense of detachment. Contrary, support, recognition and professional trust is found to lead to revitalized and increased motivation, commitment and resilience. (Day & Gu, 2009.) Resilience instead, has been found to increase employees' commitment towards a change (Bardoel et al., 2014).

### **2.5.2 Enhancing resilience through organisational practices**

Resilience enhancing organisational practices can be defined as intentional and implemented practices offering employees opportunities to cope with adversity and to develop and maintain resilience strengthening resources (Luthans et al., 2006). Research has shown that there are multiple organisational practices for developing resilience and it is likely that several practices are needed to achieve enhanced resilience (Bardoel et al., 2014). Previous research shows that for organizations to improve and maintain competitive advantage, its organisational practices and HR strategies should be highly unique and innovative, context specific, hard to mimic, and non-substitutable. Positive psychological capacities, talent, innovation and authenticity should be trained and developed not only in employees but in leaders and HR units as well; thus, helping the whole organisation in contributing to the achievement of organizational goals. Psychological capital and especially resilience have been found to facilitate the achievement of these desirable characteristics. (Toor & Ofori, 2010.)

Resilience as conceptualized through PsyCap, is defined more as a state than as a trait, thus, being highly susceptible to change and well responsive to good management practices (Britt et al., 2016). An organisations capacity to develop resilience arises from a variety of particular organizational practices and processes requiring cognitive, behavioural and contextual abilities. These capabilities in turn arise from a combination of employee capabilities, skills, knowledge, and other attributes, which are developed and implemented through an organisation's HRM system. Organisational and HR practices have a key role in developing resilience in an organisation. (Lengnick-Hall et al., 2011.) Whether the need for resilience is perceived as high or low, research shows that investments made towards resilience can yield

high returns for an organisation. (Lengnick-Hall et al., 2011.)

Resilience-enhancing HR practices can be both proactive and reactive. Proactive practices involve the anticipation of the need for resilience by focusing either on risks, assets or processes. Reactive, or supportive, practices focus on training employees to be positive-minded and find meaning even in adversities and negative events. Thus, resilience can also be build through positive affectivity, self-enhancement, attributions and hardiness. (Bardoel et al., 2014; Luthans et al., 2006.)

Resilience can also be enhanced through an organisation's cognitive, behavioural or contextual capabilities. An organisation's cognitive capabilities include fostering a positive attitude through core values, high purposefulness, sensemaking, vision, and purposeful use of communication. Behavioural capabilities include resourcefulness, agility, preparedness and useful habits. Contextual capabilities, in turn, include both psychological and physical safety, distributed power, social capital, accountability, and wide social networks. To develop resilience, organisational practices must be consistent throughout the organisation and focused on enhancing these cognitive, behavioral, and contextual capabilities. (Lengnick-Hall et al., 2011.)

Previous research has found a range of different resilience enhancing HRM practices, such as employee development programs, especially resilience training, work–life balance practices, flexible work arrangements, development of social support at work, good reward and benefit practices and risk, crisis and diversity management (Bardoel et al., 2014; Turner, 2014). Especially social support has been identified to be an important resource in widening internal and personal resources and in replacing and reinforcing those lacking. Caring relationships have been viewed as an important asset for employee resilience. (Bardoel et al., 2014; Turner, 2014.) In addition, organisations should aim to share information, decision-making and knowledge widely (Lengnick-Hall et al., 2011).

### **2.5.3 The role of managers and supervisors in enhancing resilience**

Supervisor support and mentoring employees have in previous studies been found to increase and enhance employee resilience (Chiaburu et al., 2006; Day & Allen, 2004; Lyons et al., 2015). Managers and supervisors have an important role in identifying employee needs and

finding solutions to support and encourage employees, especially aging employees. Supervisors have the responsibility to identify practices that increase the job satisfaction, commitment and overall wellbeing of employees. (Zaniboni et al., 2015.) They have, in addition, an important role in supporting and reinforcing employee resilience. Managers and supervisors influence, for example, the way achievements are recognized and how employees are supported, mentored and developed professionally and personally. Careful assessment of the situation, and taking into account individual characteristics, strength and abilities, should be the starting point of resilience building, followed by responding to the identified needs, as well as making use of assessed strengths. (Hatler & Sturgeon, 2013.)

In addition to assessment, important steps are also acceptance of the situation and flexible and creative adaptation to the assessed situation. For leaders, it is important to develop explanation skills for the communication of situations and needed changes in a way that reflects the values of employees. The ability to reframe events in a positive and approachable way lets employees maintain hopefulness and helps them recognize meaningfulness despite adversities and changes. Effective resilience-building leaders must challenge their employees' negative thinking patterns and generate alternative ways of assessing and thinking of situations. Building resilience requires a change in the thinking of individuals, and even though leaders cannot directly modify the ways in which their employees think, they can definitely offer alternative thinking patterns. (Hatler & Sturgeon, 2013.)

#### **2.5.4 Enhancing resilience among older employees**

Organisational practices focused on older employees have gained lots of interest among HRM research. The focus of these studies has been both on specific areas of HRM, such as training, or on the significance of multiple HRM practices for the retention of older employees. (Salminen et al., 2016.) The literature on older employees consists of a wide amount of different HR practices intended to meet the needs and preferences of the ageing employees. However, organisations may view investing in older employees as costly and thus, might be reluctant to implement these age-related HR practices. (Armstrong-Stassen & Cattaneo, 2010.) Nevertheless, HR units have the responsibility to implement practices that consider the needs and the wellbeing of older employees; thus making sure they have the ability to utilize their full potential and higher intentions to work until retirement age (Kooij et al., 2008). The needs and preferences of older employees should also be taken into consideration when



planning resilience-enhancing practices.

Regarding the training of older employees, it has been found to be essential to adapt the training techniques and the learning environment to suit older employees' preferences, needs and leaning styles. Age awareness should also be trained among managers and supervisors to best support and serve older employees. Changing the attitudes of managers and supervisors towards older employees is essential for their wellbeing. (Armstrong-Stassen & Templer, 2005.)

As employees grow older, the challenges of keeping high levels of motivation and energy increases. In addition, challenges experienced by older employees include ones related to the ageing process and unexpected personal circumstances. These challenges may begin to have an effect on motivation, resilience and organisational commitment which are vital to the willingness and ability of maintaining a good level of work ability. (Day & Gu, 2009.) Older employees experience an increased amount of adversities, such as losses, age-related health issues and changes in their everyday life (Hildon et al., 2008). Considering these challenges, developing resilience among older employees seems crucial for their wellbeing, and this increased need of resilience should be acknowledged when planning resilience-enhancing practices on an organisational level.

Previous research has shown a connection between HR practices and intentions to continue working until retirement age and after, and that motivation to continue working can be affected through different organisational practices (Armstrong-Stassen, 2008; Armstrong-Stassen & Schlosser, 2010; Kooij et al., 2008). In addition, research among age management has shown the importance of HRM practices for retaining older employees (Ilmarinen, 2006; Salminen et al., 2016). Research varies regarding the relationship of resilience and employees' turnover intentions. Some studies have shown that resilience affects turnover intentions through the construct of commitment (Airila et al., 2014) while others found the effect of resilience to be mediated by job satisfaction (Ghandi, Hejazi & Ghandi, 2017). In addition, an Australian study on teachers showed a direct connection between the level of resilience and intentions to leave the profession (Arnup & Bowles, 2016). Nevertheless, resilience seems to be a crucial construct for the retention of employees and its' importance should be acknowledged in organisations and their practices.

## **3. RESEARCH METHODOLOGY**

### **3.1 Research method and data collection**

This study relies on a cross-sectional research setting and a quantitative study approach. Quantitative methodology is typically based on previous theories and research, aiming to find empirical cause-and-effect relationships between variables to confirm previous research or to establish new theories and models to explain phenomena. It is typical for a quantitative methodology to have an extensive research material and a randomized sample; thus, results being easily generalizable. (Heikkilä & Ellibs, 2017.)

The data for this study were collected during the spring of 2016 from the Kuopio University Hospital for the purposes of the JATKIS-project, which is funded by the Finnish Institute of Occupational Health. The JATKIS-project was initiated in 2015 and concentrates on the effects of the Finnish retirement reform and on older employees and their intentions to work until retirement age and beyond. The authorization for the study was received from both the University of Jyväskylä and from the ethical advisory board of the hospital. Data were collected from hospital nurses, aged 50 or over. The threshold for older employees was set at 50, based on the definition of OECD (2006). The questionnaire prepared for this study was sent through mail to 962 nurses and 396 responded to the survey. The response rate was 41 percent, which is perceived as reasonable in this kind of studies (Badger & Werrett, 2005).

I received the data during October 2017, after signing a use permission contract pledging professional confidentiality. Thus, I agreed not to assign any personal information forward to third parties and to guard the data from external threats. Data will be used and analysed accurately and will be forwarded back to the project administrators, including all material produced during this study.

### **3.2 Participants**

The participants of this study comprise of hospital nurses, from five different areas of expertise, such as practical, registered or specialized nurses. Their ages vary between 50 and

69, with the average age of 57. The participants consist mostly of woman (90 %). Their education varies from basic training on the job to a higher level of education, with most of the participants having a basic college degree (61 %). Most of the participants work either as a registered nurse (40 %) or as a practical nurse (25 %). Work experience of the participants varies between six and 59 years with an average of 34 years and with a mean of 22 years in the studied organization. 92 percent of the participants are currently working full-time. Their average income is 2844 € / month and 50 percent estimate their family's financial situation to be quite good (a score of 4, on a scale from 1 to 5). Further descriptive statistics on background variables can be found in Table 1.

**Table 1** Background variables

<b>Background variables</b>	<b>n</b>	<b>%</b>
<b>Gender</b>		
Women	353	90 %
Men	39	10 %
<b>Age</b>		
50–54	84	21 %
55–59	195	50 %
60–64	108	28 %
65–69	4	1 %
<b>Marital status</b>		
Married or cohabitating	280	72 %
Single, divorced or widowed	109	28 %
<b>Occupation</b>		
Practical nurse	81	25 %
Mental health nurse	13	4 %
Registered nurse	131	40 %
Specialized nurse	60	19 %
Managerial nurse	39	12 %
<b>Employment type</b>		
Full-time	358	92 %
Part-time	33	8 %

**Financial situation**

Very bad (1)	5	1 %
Quite bad (2)	19	5 %
Satisfying (3)	126	32 %
Quite good (4)	195	50 %
Very Good (5)	46	12 %

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In addition to the background variables mentioned and addressed above, the questionnaire included questions regarding basic education, professional education, length of employment, working hours and overtime, part-time retirement, number of children or dependants and finally, amounts of benefits or other monetary support. However, these variables are not included in this study.

**3.3 Measures**

The 68-scaled questionnaire includes a variety of measures that are constructed and based on measures previously used in research. In this study multiple measures were used to analyze associations in the data. Most of the measures consist of multiple statements or questions assessed on a five-item Likert-scale, but questions regarding background variables included some open answer possibilities as well. Answer options ranged from strongly disagreeing (1) to strongly agreeing (5) with the statement. Some other answer options were available too, depending on the layout of the statement. The questionnaire is partially displayed in Appendix 1, including only the questions, and thus, the measures, used in this study. The questionnaire is displayed in the original Finnish language.

Some measures had conditional questions and depending on the answer, participants were either asked to continue with the next questions or to jump to the next set of questions. This is the case, for example, with the resilience measure in which participants were first asked “What has been the most stressful event in your life during the last five years?” (Hardy et al., 2004) and if they answered that they had not had a stressful event in their life during this period, they were asked to continue to the next section; thus, not answering resilience related questions at all, since the resilience measure is based on the notion that adversity is needed to show resilience.

*Resilience* The resilience measure used in this study is based on the measure and scale first introduced by Hardy et al. (2004) and is based on responses to adverse life events. Several traditional and personality-based psychometric scales have been generated to measure resilience but Hardy et al. (2004) took an outcome approach in their scale by identifying resilience as an outcome to adverse life events. In their study, participants aged 70 or older were asked to identify the most stressful event during the last five years and responses were grouped into four categories: personal illness, death of a family member or friend, illness of a family member or friend, and nonmedical event. They were then asked to assess the consequences of the adverse life events. Based on their study, Hardy et al. (2004) developed a six-item resilience scale with scores ranging from zero (low resilience) to 18 (high resilience).

The measure of resilience used in this study is based on the work of Hardy et al. (2004) with an 11-item resilience scale with scores ranging between zero (low resilience) to 17 (high resilience). Individuals were divided into three categories according to their resilience score: low resilience (0-6), average resilience (7-10) and high resilience (11-17). The level of resilience is categorized based on the categorization of Hardy et al. (2004). The scale is based on outcomes to adverse life events and participants are first asked to identify whether they have encountered a stressful life event during the last five years with options reflecting the response grouping assessed by Hardy et al. (2004). If participants did not identify an adverse life event, they were asked to continue to the next section, thus, not responding to the questions identifying the level of resilience. Instead, if they had encountered a stressful life event, participants were asked to continue answering questions regarding their actions after the event. These included questions such as “How much worse did you feel after the stressful event compared to your feelings before the event?” and “How long after the event you started feeling better?”. The answering scales varied upon the different questions. A sum of variables was created from the 11 items related to the scale. The Cronbach’s  $\alpha$  of the resilience scale was calculated with a specific formula previous to this study and it is, thus, not displayed in this study.

The resilience scale of Hardy et al. (2004) was initially based on stressful events and adversities not directly related to work. However, resilience is conceptualized as a general quality demonstrated rather consistently across multiple contexts in life (Britt et al., 2016); meaning that highly resilient individuals are more likely to flourish in both the work-related and non-work related contexts (Turner, 2014). Thus, resilience is conceptualized as a non-

context specific capacity, meaning that showing resilience in one area of life transfers to other areas as well. Resilience, as viewed in this study, is not a contextual feature. In addition, it is assumable that adverse life events do impact worklife as well, thus, resilience is shown similarly in both personal and worklife.

*Work ability* was measured with one item through the question “Let’s assume that your work ability at its best have a score of ten points. What kind of scoring would you give to your current work ability?”. The questions were then assessed on a scale from zero to ten with a score of zero meaning that the participant is not able to work at all and ten meaning one’s best work ability. This measure is part of a larger scale of work ability developed by Tuomi (1997) and it has been widely used in HR research (Bonsdorff, Koponen & Miettinen, 2008; Salminen et al., 2016).

*Job satisfaction* was the only measure to be assessed with a one-item question. The question was “How satisfied or unsatisfied are you towards your current job?” and was assessed on a five-point response scale varying from very unsatisfied (1) to very satisfied (5). A single-item measure has been validated in previous studies and demonstrated to be an equally effective approach as multiple-item measures (Nagy, 2002).

*Perceived organisational commitment* was measured with a 6-item scale based on the work of Mowday, Steers & Porter (1979). Statements assessed different aspects of commitment to the organisation. The scale included statements such as “I’m proud to tell that I work in this organisation” and “I’m willing to push myself for the benefit of the organisations’ success” The scale ranged from very little (1) to very much (5). A sum of variables was created from the six items related to the scale (Cronbach’s  $\alpha = .825$ ).

*Intentions to continue working until retirement age* was assessed with two items regarding the intention of participants to continue working until age of retirement: “I am willing to continue working until retirement age” and “Taking into account my health, I am able to continue working until retirement age”. A five-point response scale was applied for these items varying from strongly disagreeing (1) to strongly agreeing (5). A sum of variables was created from the two items related to the scale (Cronbach’s  $\alpha = .742$ ).

*Perceived high-Involvement work practices (HIWP)* This measure is based on the work of

Harmon et al. (2003) and involves assessment of those organisational and HR practices that promote involvement among employees. This measure consists of a ten-item scale with statements such as “Employees are aware of factors affecting their work” and “There is a good team spirit and a climate of co-working”. Responses were assessed through five options varying from very little (1) to very much (5). A sum of variables was created from the ten items related to the scale (Cronbach’s  $\alpha = .875$ ).

*Perceived organisational justice* was measured with a 12-item scale with statements regarding different aspects of the working and management culture of the organisation. The scale included statements such as “Everybody is treated the same way”, “Decision making is impartial” and “Compensation is fair weighed against performance”. A five-point response scale was applied for these items varying from strongly disagreeing (1) to strongly agreeing (5). The measure is based on the work of Colquitt & Rodell (2011). A sum of variables was created from the 12 items related to the scale (Cronbach’s  $\alpha = .930$ ).

*Perceived supervisor’s support* was assessed with a four-item scale of different statements regarding the attitudes of one’s supervisor and their perceived helpfulness. The scale included statements such as “Supervisors support and encourage employees” and “Supervisors appreciate their employees’ work”. The scale ranged from very little (1) to very much (5). The measure is based on the work of Bucholz, Roth & Hess (1987). A sum of variables was created from the four items related to the scale (Cronbach’s  $\alpha = .910$ ).

Using measures validated and used in previous research allows for comparison of results between studies. Another advantage of using validated measures is that validity and reliability of these measures has already been tested and analyzed and they have been tested on large samples. In this study, the reliability of the measures has additionally been assessed with the Cronbach’s alfa measure, which is one of the most used statistics to assess reliability of measures (Metsämuuronen, 2002). The Cronbach’s alpha values of all measures used in this study are over 0.7, which is perceived to be a threshold for reliable measures (Heikkilä & Ellibs, 2017; Metsämuuronen, 2002). See Table 2 for additional information on the measures’ Cronbach’s alphas and measure descriptive.

**Table 2** Measure descriptives

	<i>n</i>	Mean	<i>SD</i>	<i>α</i>	Items
Resilience	319	7.27	2.47	-	11
HIWP	386	33.21	6.238	.875	10
Organisational commitment	381	20.99	4.408	.825	6
Organisational justice	379	37.95	9.650	.930	12
Supervisor's support	390	13.47	3.741	.910	4
Continuing working until retirement	387	7.51	2.169	.742	2

As background variables, this study analyzed gender, age, marital status and financial situation. Studies regarding risk groups for higher stress reactions after adversity have consistently found that female gender, a lack of education and younger age put individuals at risk of experiencing more stress-related difficulties in life. Thus, factors like male gender, higher education and older age are expected to predict higher levels of resilience. (Bonanno et al., 2007.) However, in this study, the educational level was not taken into account since all participants were nurses and of approximately the same education level, even though there were some differences among the different specialties. Some of the background variables were recoded as dummy factors for the purposes of this study: marital status coded as 0 = single or 1 = in a relationship and financial situation coded as 0 = very bad, bad or average financial situation or 1 = good or very good financial situation. Age was used as a continuous variable and gender coded as 0 = male or 1 = female.

Social and material resources have also been found in previous research to have a role in the way individuals cope with stress. This notion is, in addition, a fundamental aspect of the COR- theory, where a loss of resources is viewed as a threat for the normal functioning of an individual. Studies have demonstrated that income is a significant determinant of resilience and that individuals with less social support in life are less likely to be resilient. (Bonanno et al., 2007.) In addition, multiple researches have demonstrated the positive correlation between marital status and health among older individuals; married individuals demonstrating greater health and survival outcomes (Goldman et al., 1995). Therefore, financial situation and marital status are taken into account as background variables as well.



### 3.4 Analyses

The aim of this study was to examine associations between resilience of older employees and different work-related factors and organisational practices. For these purposes, multiple descriptive statistics, mean comparisons and correlations were analyzed to better understand significant differences and which variables might be significantly connected. To analyze connections further between resilience and both work-related factors and organisational practices, a One-way ANOVA and consequently a linear regression model were used. Since the data were so extensive ( $n = 396$ ) it opened up to a wide range of different analysis possibilities (Metsämuuronen, 2010; Heikkilä & Ellibs, 2017).

The One-way ANOVA was chosen in this study to investigate significant differences of means between levels of resilience, different work-related factors, organisational practices and background variables. The ANOVA test is one of the most versatile techniques in quantitative methodology. ANOVA assumes that at least one of the group means is different from one another and it measures how different each group's mean is from the overall mean. (Weiss, 2006.)

A linear regression analysis was chosen to investigate significant relationships between variables. This technique allows analysing the relationship of multiple independent variables in regards to the dependent variable and consequently builds a model of the relationship between variables. Regression analysis is a statistical method for examining and modelling relationships between variables and is one of the most widely used techniques for these purposes. However, even though the regression analysis might show a strong empirical relationship between variables, it does not entail a cause-and-effect relationship between them. (Chatterjee & Hadi, 2012.)

The received data included ready sum of variables made from the measures of the questionnaire and background variables were already recoded as dummy variables as well. However, for the purposes of this study, the resilience scale was additionally divided into the three categories based on suggestions by Hardy et al. (2004) (low, average and high resilience) and the scale assessing stressful events in life was recoded as a dummy factor: 0 = having experienced stressful events during the past five years coded, and 1 = not having

experienced any stressful events. Next, the data were analysed with various methods. All the analysis methods were chosen carefully to achieve a versatile and reliable illustration of the data and its' underlying associations. The analyses were conducted with the IBM SPSS Statistics version 20.

The data were first analyzed by using descriptive statistics, such as frequencies and crosstabs. In addition, an independent-samples t-test was conducted to analyze data based on different groups. Descriptive statistics contribute to a comprehensive picture of the data and its nature, thus, being a fundamental component of a quantitative analysis (Heikkilä & Ellibs, 2017). In addition, descriptive statistics offer a sound ground for analysing the data with further analysis (Jokivuori & Hietala, 2014). Next, the data were analyzed with an ANOVA test and post hoc tests to investigate whether there were significant differences in the means of variables. As post-hoc analysis was used the Sheffe method, since equal variances were assumed.

Consequently correlations were analysed to get some insight on the possible relationships between variables. However, correlations are not enough to establish causalities but they offer a good baseline to continue analysis with a linear regression model (Heikkilä & Ellibs, 2017). The purpose of a linear regression analysis is to investigate which variables explain the phenomenon of interest. Through this method it is possible to build models of explanation for the chosen variables. (Jokivuori & Hietala, 2014; Metsämuuronen, 2010.) In the regression analysis multiple independent variables can be included in the model, but only one dependent variable (Heikkilä & Ellibs, 2017). Thus, this method suits this study well and makes it possible to pursue answering the study questions. In this study, three models were built based on analysis and previous literature: a model for work ability, one for job satisfaction and finally one for intentions to continue working until retirement age. The models were built with a stepwise method, meaning all the included variables and their combinations are tested one at a time and only the variables with the highest explanation levels are included in the final results (Metsämuuronen, 2010).

## **4. RESULTS**

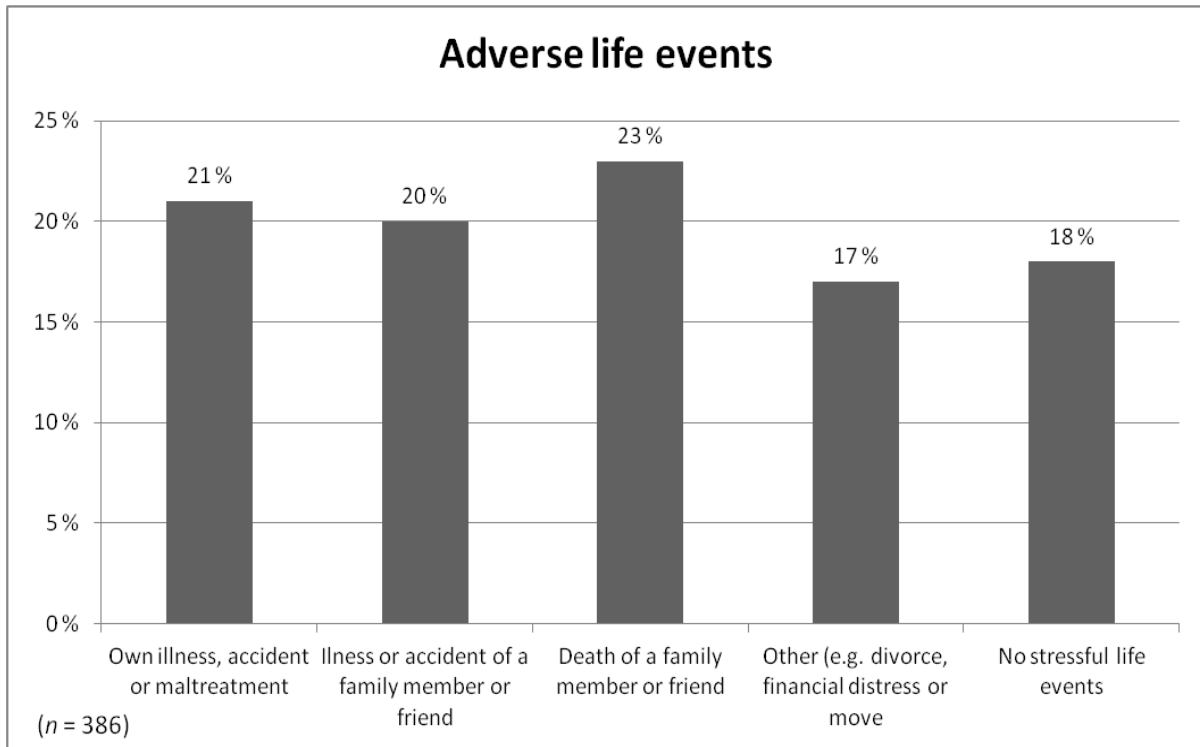
### **4.1 Descriptive statistics**

A variety of different descriptive statistics were used in this study to form a good basis for consequent analysis. First, I will review results regarding the experienced adverse life events among participants and how stressful these events were perceived as. I will also compare those who had encountered an adverse life event and those who had not, against background variables and work-related factors. Next, I will examine the levels of resilience among participants and associations between levels of resilience and background variables, as well as work-related factors. Finally, I will also examine levels of work-ability, job satisfaction and intentions to continue working until retirement age among participants and their associations to background variables.

#### **4.1.1 Adverse life events**

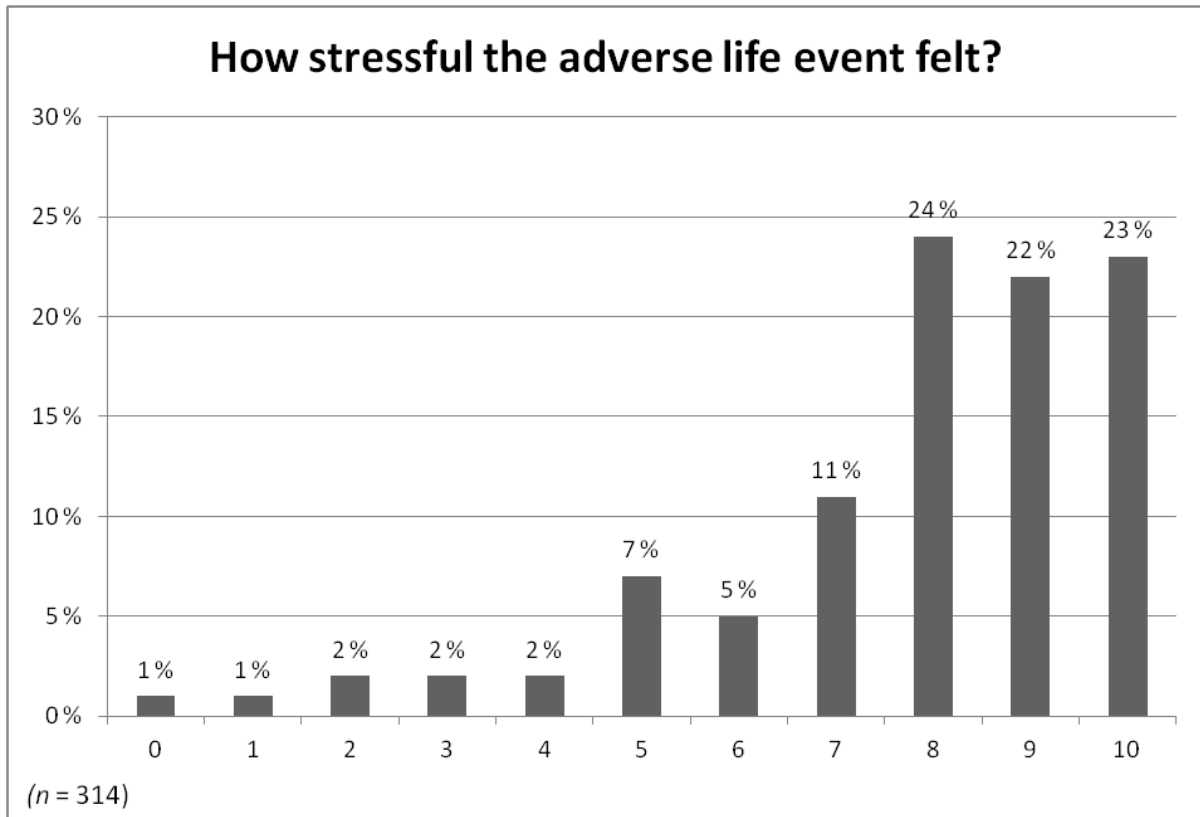
The first item of the resilience measure in the questionnaire is the question of whether the participants had encountered adverse life events during the past five years. To continue answering to questions related to the resilience measure, participants had to pick one option from the given list. The list included 11 different options, which were combined in the analysis stage to form five main categories of adverse life events: (1) own illness, accident or maltreatment, (2) illness or accident of a family member or friend, (3) death of a family member or friend, (4) other stressful events, such as divorce, financial distress or moving, and (5) no adverse life events.

Most of the participants ( $n = 315$ , 82 %) had encountered an adverse life event during the past five years. Responses distributed rather equally between different adverse life events, with the death of a family member or friend being the most common stressor ( $n = 90$ , 23 %) and both one's own illness or accident and that of a family member or a friend as second and third most common adverse life events. 18 percent ( $n = 71$ ) of participants had not encountered any adverse life events during the past five years. See further results in Figure 2.



**Figure 2** Experienced adverse life events during the last five years (%)

Next, I explored how stressful the adverse life events were perceived as. Most of the participants who had encountered an adverse life event perceived the event as very stressful ( $n = 215$ , 69 %) assessing the stressfulness as very high (scores ranging between 8 and 10, on a scale from 0 = not stressful at all, to 10 = very stressful). 23 percent ( $n = 73$ ) of participants assessed the stressfulness of events with average scores (scores ranging between 5 and 7), and only eight percent as less stressful (scores between 0 and 4). See Figure 3 for further results.



**Figure 3** How stressful the adverse life event felt (%)

Differences between having experienced an adverse life event and not, were analysed against background variables such as age, gender, marital status and financial situation. These differences were analysed with a *t*-test. Differences were found between adverse life events and two background variables: gender ( $t = 1.87, df = 383, p < .01$ ) and financial situation ( $t = -3.36, df = 383, p < .001$ ). Regarding gender, women ( $mean = 1.17, SD = .378, n = 348$ ) had experienced more adverse life events than men ( $mean = 1.30, SD = .463, n = 37$ ). Regarding the financial situation, participants who perceived to have a bad or below average financial situation ( $mean = 1.10, SD = .303, n = 148$ ) had encountered more adverse life events than those who perceived to have a better financial situation ( $mean = 1.24, SD = .426, n = 237$ ). See Table 3.

In addition, differences between individuals who had encountered an adverse life event and those who had not, were analysed in regards to work-related factors such as work ability, job satisfaction and organisational commitment. Significant differences regarding work-related factors were found only among work ability ( $t = -3.31, df = 383, p < .01$ ). The work ability of individuals who had encountered an adverse life event ( $mean = 7.66, SD = 1.619, n = 314$ )

was significantly lower than of those who had not ( $mean = 8.32$ ,  $SD = 1.093$ ,  $n = 71$ ). See Table 3.

**Table 3** *T*-test results

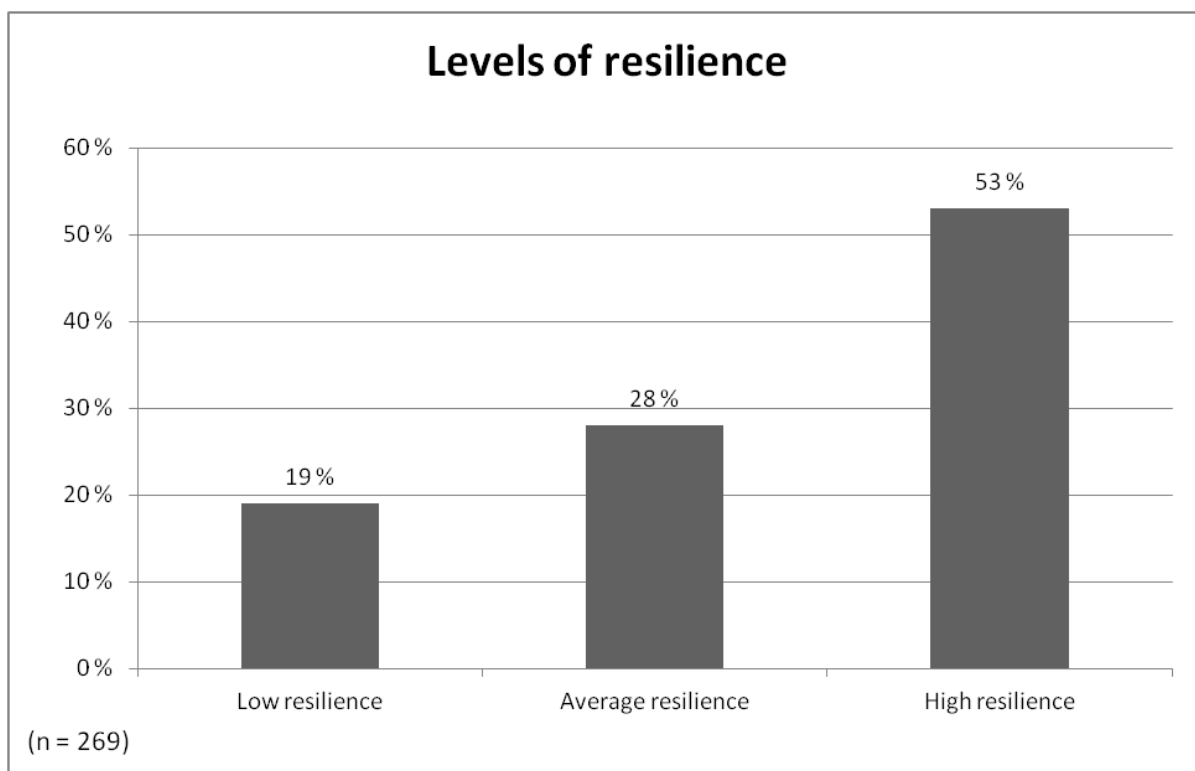
	<i>t</i> -value	<i>df</i>	<i>p</i>
Age	-1.182	382	.681
Gender	1.866	383	<.001
Marital status	-.589	381	.216
Financial situation	-3.361	383	<.001
Work ability	-3.307	383	.009
Job satisfaction	-2.290	378	.943

*Note:* Significant at the  $p < .05$  level.

Next, I will examine levels of resilience among participants and associations between levels of resilience, background variables and work-related factors.

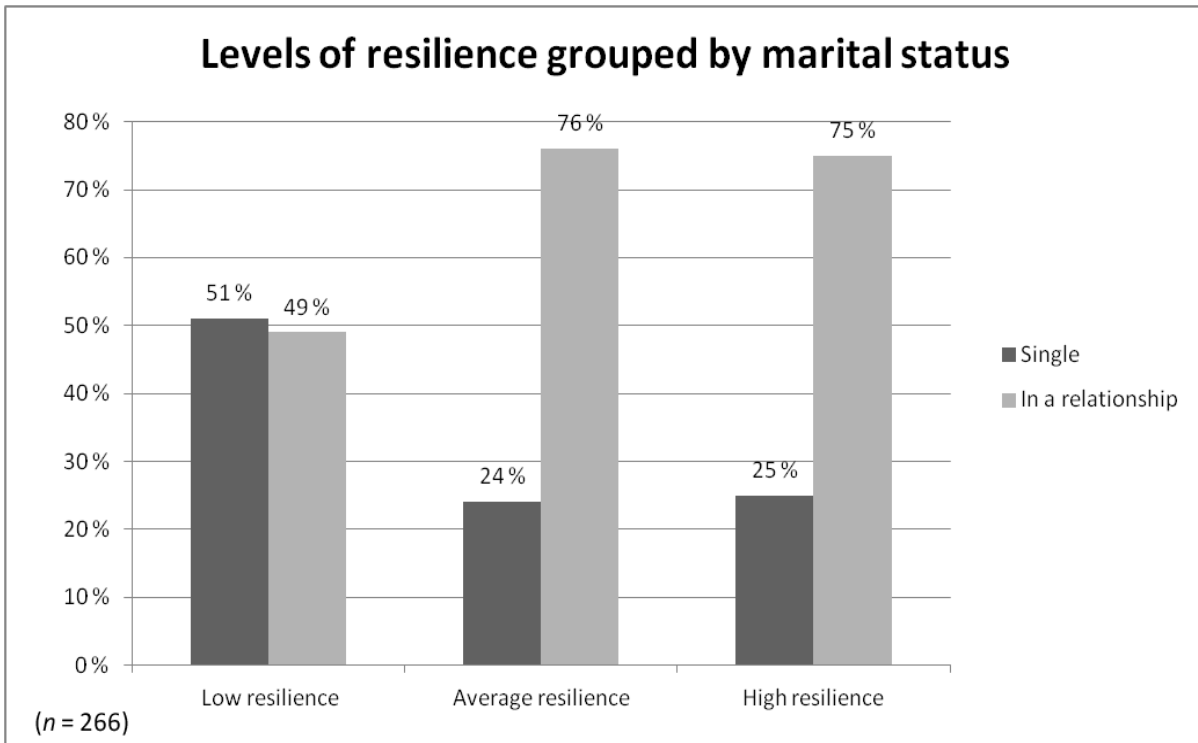
#### 4.1.2 Levels of resilience

Those who had experienced adverse life events were next analysed regarding their level of resilience. Results show that most of the participants ( $n = 144$ , 53 %) fell into the category of highly resilient individuals (scores ranging from 11 to 17). 28 percent ( $n = 74$ ) of participants fell into the average resilience category (scores from 7 to 10) and only 19 percent ( $n = 51$ ) in the low resilience category (scores from 0 to 6). See further information in Figure 4.

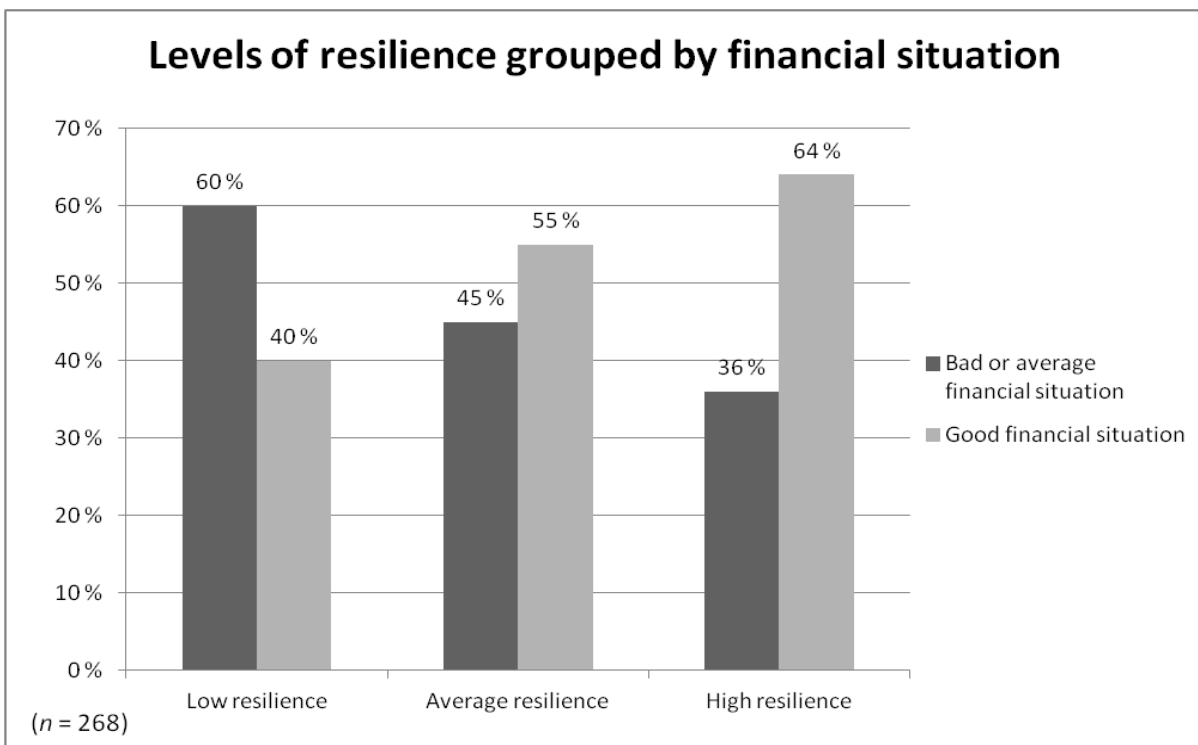


**Figure 4** Levels of resilience among participants (%)

Participants' resilience levels were consequently compared with a crosstab analysis by grouping them by different background variables and work-related factors. Significant differences were found regarding the marital status and financial situation of individuals. In addition, age and gender were tested, but no differences were found in regards to these background variables. Married or cohabitating participants were found to be significantly more resilient than single, divorced or widowed participants ( $\chi^2 = 13.69$ ,  $df = 2$ ,  $p < .001$ ) (Figure 5). In addition, individuals with a better financial situation were found to be more resilient than individuals who perceived their financial situation of being below average ( $\chi^2 = 8.76$ ,  $df = 2$ ,  $p < .01$ ) (Figure 6). Tested work-related factors included work ability, job satisfaction, organisational commitment and intentions to continue working until retirement age. Significant differences were found regarding the job satisfaction of participants, with more resilient individuals being more satisfied with their job ( $\chi^2 = 18.05$ ,  $df = 8$ ,  $p < .05$ ) (Figure 7).

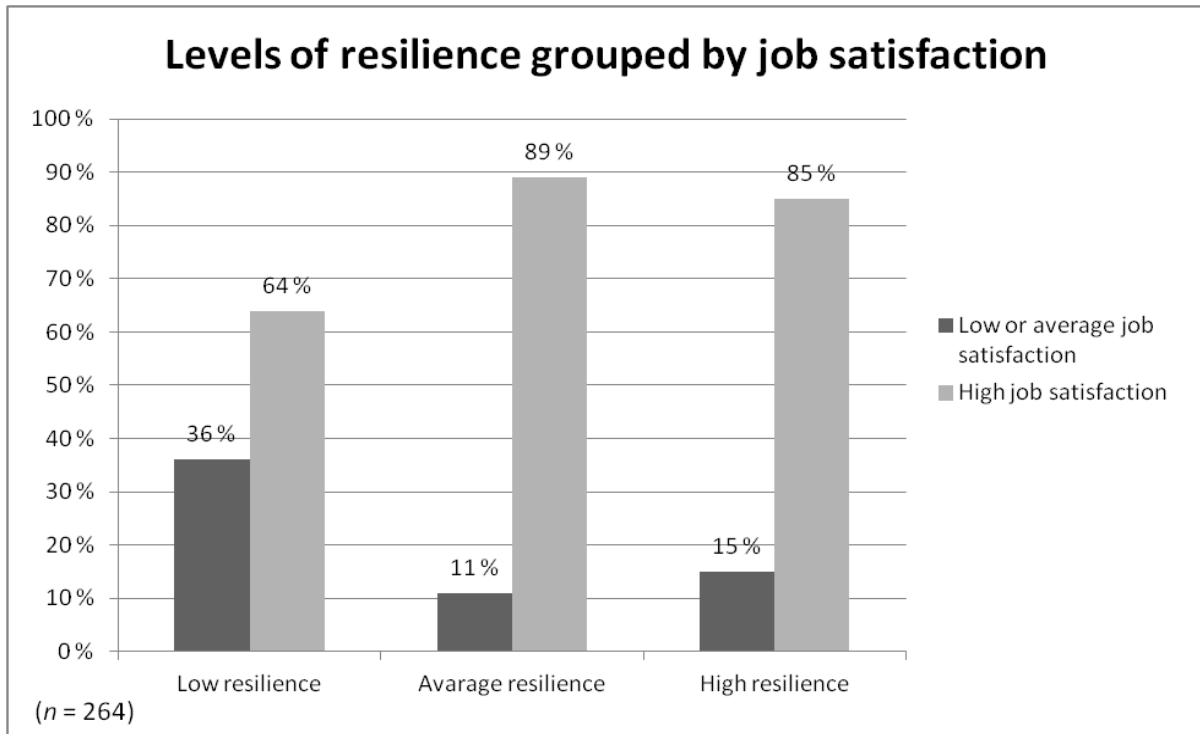


**Figure 5** Levels of resilience grouped by marital status (%)



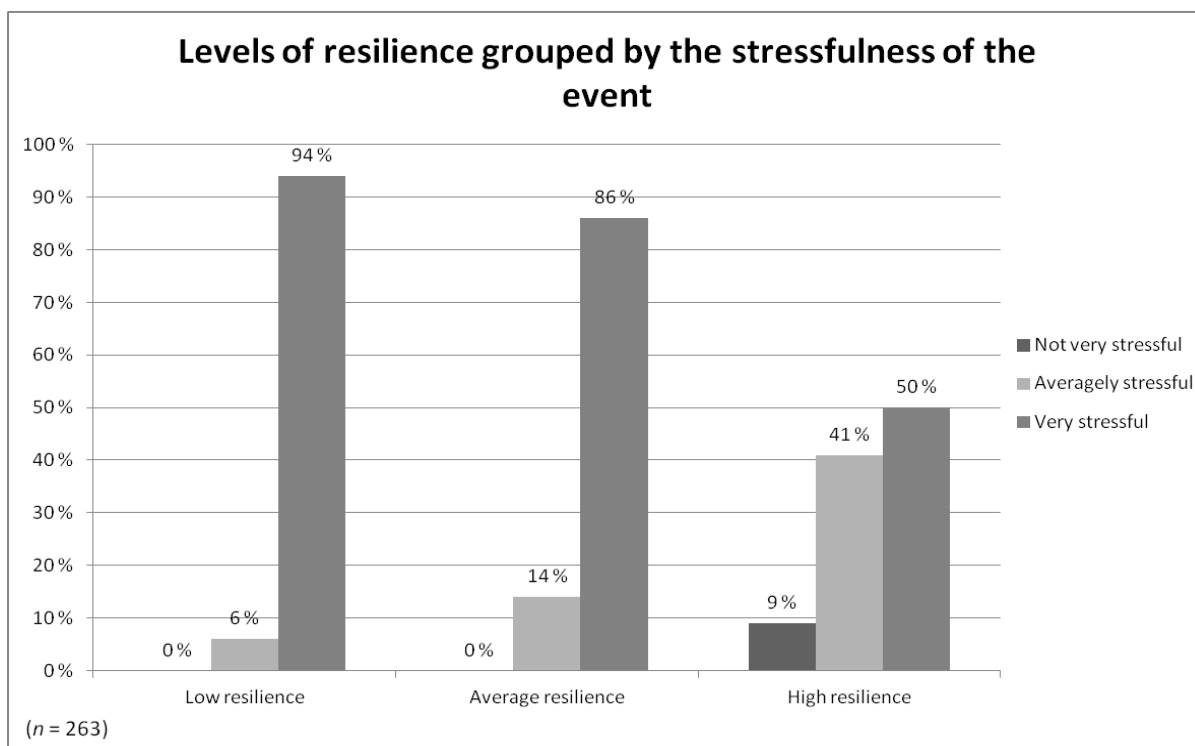
**Figure 6** Levels of resilience grouped by financial situation (%)





**Figure 7** Levels of resilience grouped by job satisfaction (%)

In addition, levels of resilience were grouped by how stressful the adverse life event felt and interesting results were found. Highly resilient individuals perceived the stressfulness of events as less stressful than those showing lower levels of resilience ( $\chi^2 = 62.65$ ,  $df = 18$ ,  $p < .001$ ). Consequently, those with low levels of resilience perceived events as very stressful compared to more resilient participants. Most ( $n = 46$ , 94 %) of the low resilient individuals assessed the stressfulness of the experienced event as very stressful (scores ranging from 8 to 10, on a scale from 0, not stressful at all, to 10, very stressful) while only half ( $n = 73$ , 50 %) of highly resilient individuals perceived the event as very stressful. All of the participants showing low resilience ( $n = 49$ ) assessed the stressfulness of events to be at least averagely stressful (with a minimum score of 5). The assessment of highly resilient individuals instead distributed along the whole range of scores (from 0 to 10). Averagely resilient individuals resembled more the low resilient individuals (with score distribution ranging between 4 and 10). See Figure 8 for further results.

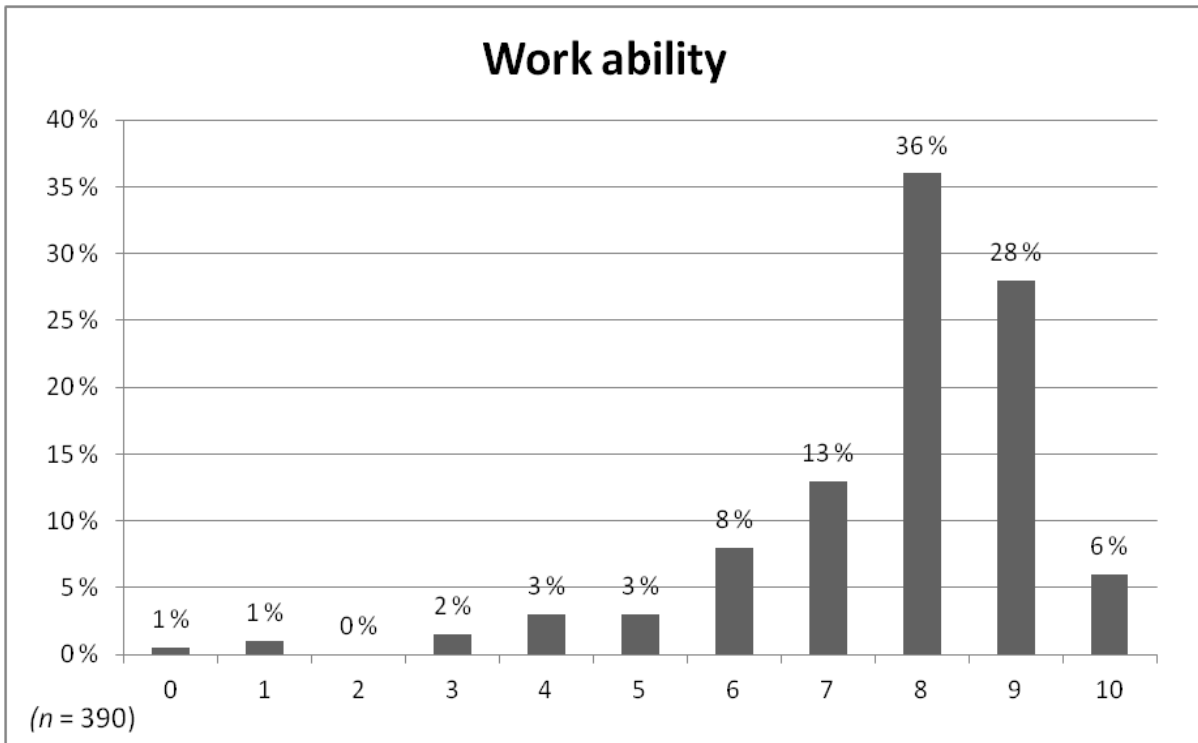


**Figure 8** Levels of resilience grouped by how stressful the adversity felt (%)

Next, I will continue to review the levels of work ability, job satisfaction and intentions to continue working until retirement age among participants.

#### 4.1.3 Work ability

Work ability was measured with one item, exploring participants' own perception of their work ability, comparing their current work ability to their best perceived work ability. Results show that the work ability of participants was quite high, with most of the nurses ( $n = 140$ , 36 %) perceiving their work ability as very high (a score of 8, on a scale from 1 = no work ability at all, to 10 = best work ability). The second most common assessment was even higher, 28 percent ( $n = 111$ ) assessing their work ability with the second highest score (9). A minority of participants ( $n = 23$ , 6 %) assessed their work ability to be at the best possible level (a score of 10). Most commonly participants assessed their work ability to be at least average (at least a score of 6), but a minority of participants assessed their work ability to be lower than average (scores between 0 and 5). One percent of participants assessed their work ability to be non-existing. See further information in Figure 9.



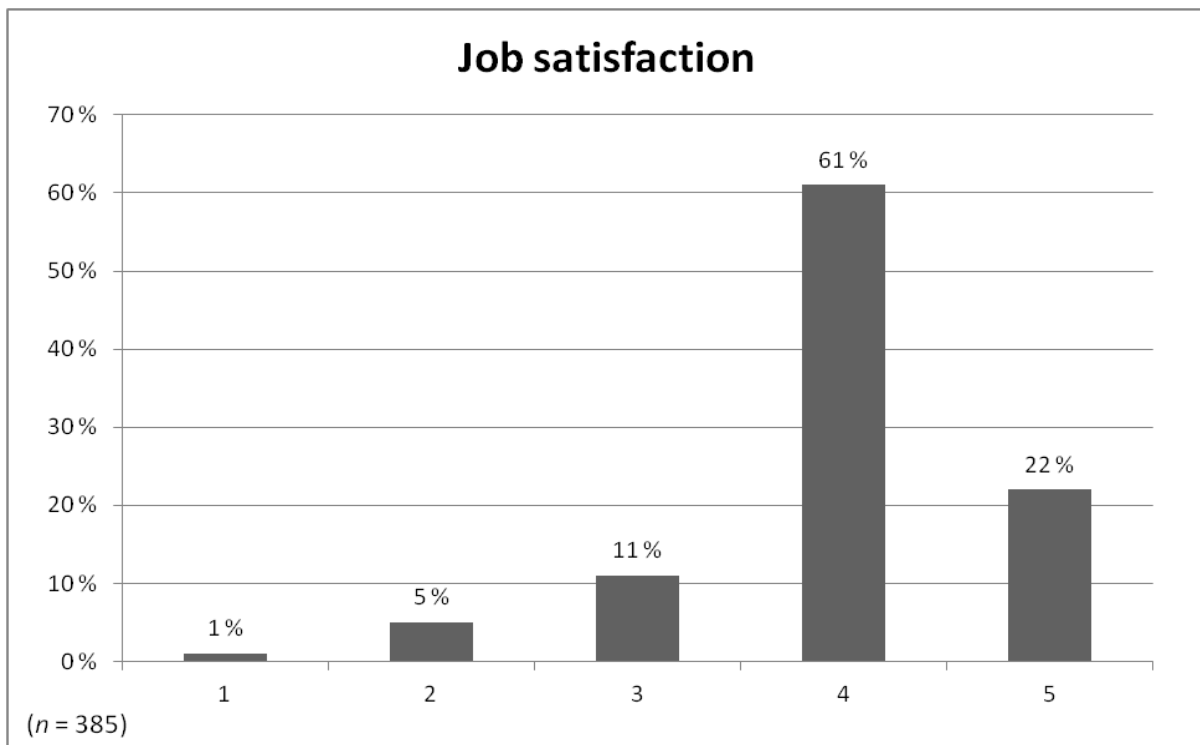
**Figure 9** Work ability among participants (%)

Work ability among participants was compared with a crosstab analysis by grouping them by different background variables, such as age, gender, marital status and financial situation. In addition, work ability between participants was compared in regards to work-related factors. Significant differences regarding background variables were found regarding the financial situation of individuals. Individuals who perceived to have a better financial situation also perceived their work ability to be better than individuals who perceived their financial situation of being below average ( $\chi^2 = 26.77$ ,  $df = 9$ ,  $p < .01$ ).

In addition, differences between work ability and work-related factors were found regarding job satisfaction, organisational commitment and intentions to continue working until retirement age. Participants who perceived better levels of work ability were more satisfied with their job ( $\chi^2 = 87.32$ ,  $df = 36$ ,  $p < .001$ ), more committed to the organisation ( $\chi^2 = 428.64$ ,  $df = 207$ ,  $p < .001$ ) and had higher intentions to continue working until retirement age ( $\chi^2 = 198.86$ ,  $df = 72$ ,  $p < .001$ ).

#### 4.1.4 Job satisfaction

Job satisfaction among participants was quite good, with most participants (83 %,  $n = 324$ ) assessing their job satisfaction as very high (scores of 4 or 5, on a scale from 1 = not satisfied to 5 = very satisfied). The most common assessment was as to be quite satisfied (61 %,  $n = 237$ ), however, six percent of participants ( $n = 19$ ) perceived to be very or quite unsatisfied. See Figure 10.



**Figure 10** Job satisfaction among participants (%)

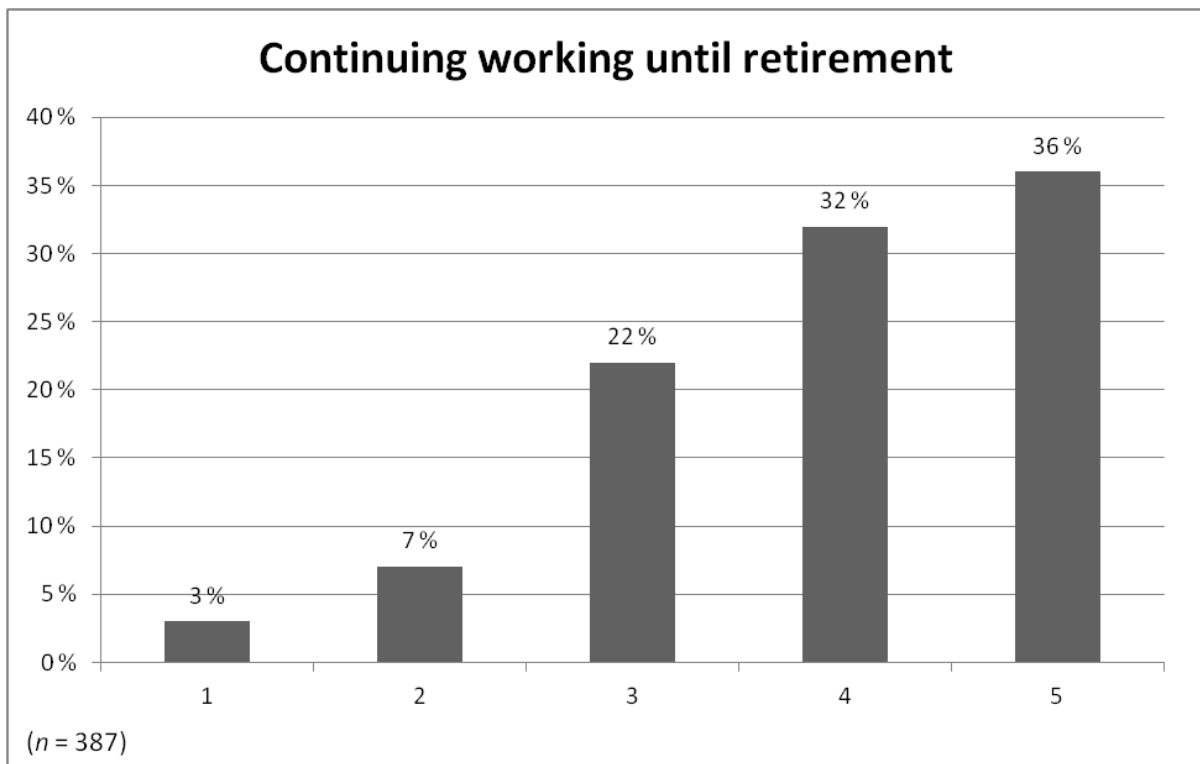
Job satisfaction among participants was compared with a crosstab analysis by grouping in regards to different background variables, such as age, gender, marital status and financial situation. In addition, relations to work-related factors were tested. Significant differences were found regarding the age and financial situation of individuals. Older participants were found to be more satisfied with their job than younger aged participants ( $\chi^2 = 93.93$ ,  $df = 64$ ,  $p < .01$ ). In addition, individuals who perceived to have a better financial situation were found to be more satisfied than individuals who perceived their financial situation of being below average ( $\chi^2 = 16.61$ ,  $df = 4$ ,  $p < .01$ ).

Significant differences between job satisfaction and work-related factors were found

regarding work ability (see previous section for details), organisational commitment and intentions to continue working until retirement age. Participants who were satisfied with their job, perceived higher levels of work ability, were more committed to the organisation ( $\chi^2 = 180.45$ ,  $df = 69$ ,  $p < .001$ ) and had higher intentions to work until retirement age ( $\chi^2 = 93.89$ ,  $df = 32$ ,  $p < .001$ ).

#### 4.1.5 Intentions to continue working until retirement age

Intentions to continue working until retirement age were quite high among participants with most of the participants ( $n = 139$ , 36 %) agreeing completely (score of 5, on a scale from 1 to 5) with the statement “I am willing to continue working until retirement age”. 22 percent ( $n = 84$ ) of participants were not sure whether they would continue working until retirement age or not. Only three percent of participants disagreed completely and had no intentions to continue working until retirement age. Further results are displayed in Figure 11.



**Figure 11** Intentions to continue working until retirement age among participants (%)

Differences in intentions to continue working until retirement age were analysed with a crosstab analysis in regards to background variables and other work-related factors. Tested

background variables include age, gender, marital status and financial situation, but no significant differences were found regarding any of these variables. However, significant differences were found in regards to work-related factors, such as work ability, job satisfaction (see details in previous sections) and organisational commitment ( $\chi^2 = 227.91$ ,  $df = 184$ ,  $p < .05$ ). Participants with higher intentions to continue working until retirement age perceived to have better work ability, were more satisfied with their job and more committed to the organisation.

## **4.2 Connections between resilience, work-related factors and organisational practices**

An ANOVA test was run to investigate significant differences of group means between levels of resilience, work-related factors and organisational practices. Multiple work-related factors were analysed in regards to the levels of resilience: work ability, job satisfaction, organisational commitment and intentions to continue working until retirement age. Results showed significant differences of means between levels of resilience and work ability ( $F = 6.23$ ,  $df = 2$ ,  $p < .01$ ), as well as between levels of resilience and job satisfaction ( $F = 5.25$ ,  $df = 2$ ,  $p < .01$ ). No differences were found in regards to organisational commitment and intentions to continue working until retirement age.

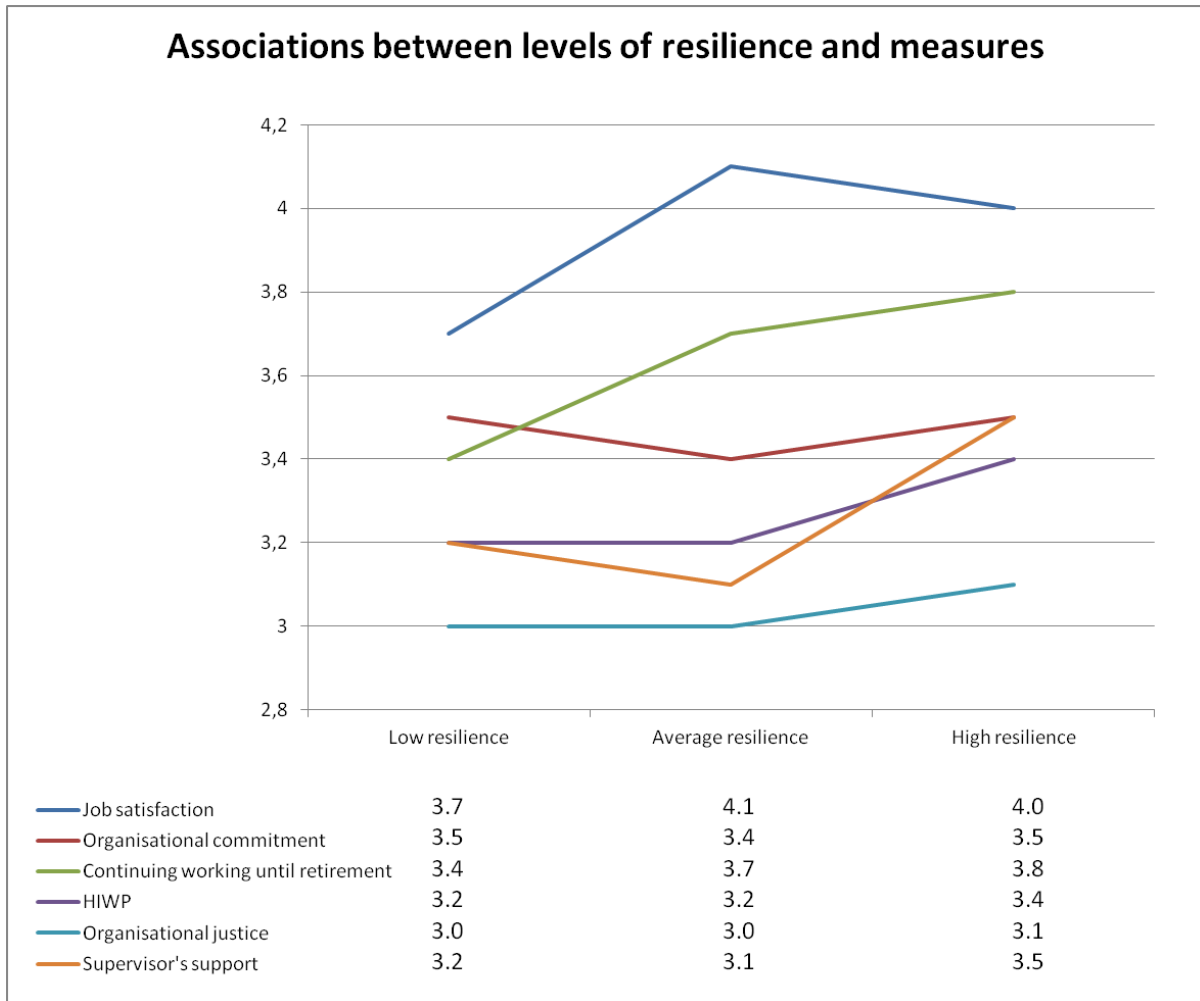
Three organisational practices were analysed with an ANOVA to investigate differences of group means: HIWP, perceived organisational justice and perceived supervisor's support. Results showed significant differences of means between levels of resilience and perceived support from one's supervisor ( $F = 5.31$ ,  $df = 2$ ,  $p < .01$ ). No differences were found in regards to HIWP and perceived organisational justice. See Table 4.

**Table 4** ANOVA table of the connections between resilience, work-related factors and organisational practices

	<i>F</i>	<i>df</i>	<i>p</i>
Work ability	6.23	2, 267	.002
Job satisfaction	5.25	2, 263	.006
Organisational commitment	0.08	2, 265	.925
Continuing working until retirement	1.77	2, 264	.172
HIWP	2.36	2, 266	.097
Organisational justice	2.61	2, 262	.076
Supervisor's support	5.31	2, 267	.005

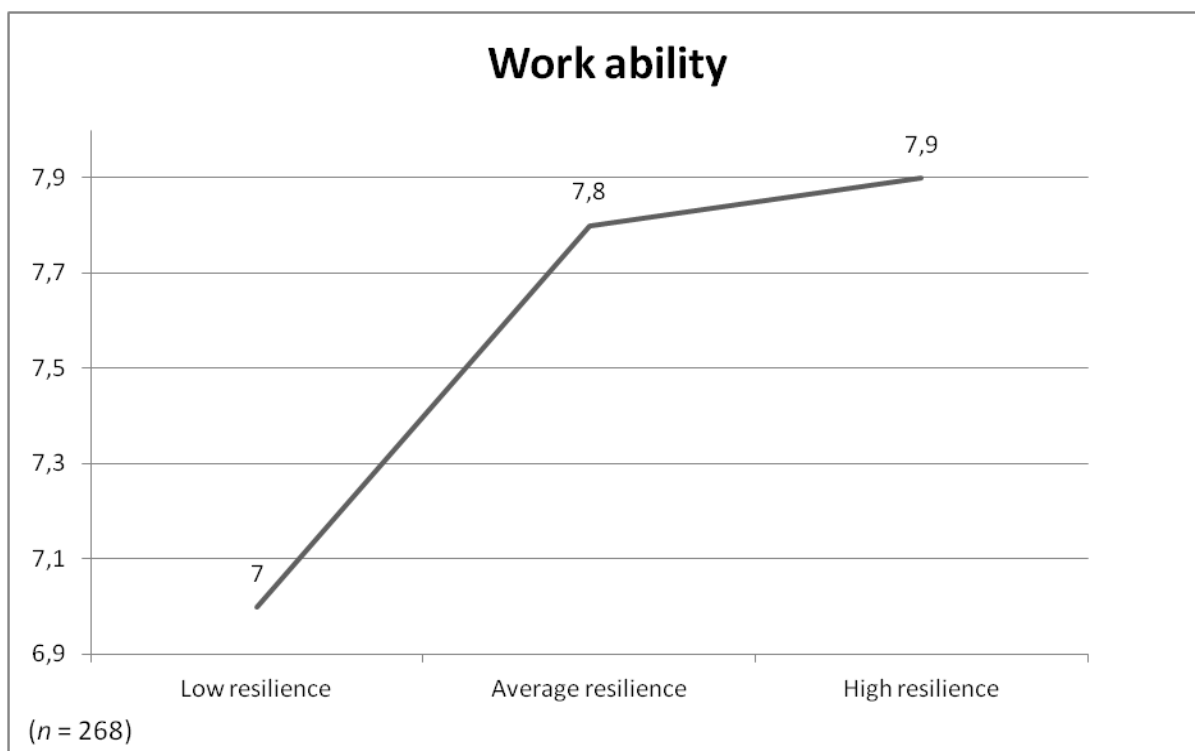
*Note:* Significant at the  $p < .05$  level.

Consequently, post hoc tests regarding levels of resilience were run for the three measures with significantly different group means: work ability, job satisfaction and perceived supervisor's support. With these tests I aimed to examine between which levels of resilience the differences were significant. Figure 12 displays the mean differences between levels of resilience and the different measures; however, work ability is displayed in a separate figure (Figure 13), since it is measured on a different scale. Significant differences between levels of resilience regarding the work ability of participants were found between both low and average resilient individuals ( $p < .05$ ) and between low and high resilient individuals ( $p < .01$ ), but not among high and average. In regards to job satisfaction significant differences were found among both low and average resilient individuals ( $p < .05$ ) and between low and high resilient ( $p < .05$ ), but not among high and average. Differences regarding resilience levels and perceived supervisor's support were found between groups of average and high resilient individuals ( $p < .05$ ).



**Figure 12** Associations between levels of resilience, work-related factors and perceived organisational practices (mean)





**Figure 13** Associations between levels of resilience and work ability (mean)

Next, a correlation analysis was run to better understand associations between resilience and other study variables. Correlations between resilience, work-related factors and different organisational practices were tested to investigate possible associations between measures. Gender, age, marital status and financial situation were entered in the analysis as dummy variables. Resilience, organisational commitment, intentions to continue working until retirement age, HIWP, organisational justice and supervisor's support were entered in the analysis as sum of variables.

Resilience correlated with almost all the tested variables. Regarding the background variables, resilience correlated significantly with gender ( $p < .05$ ), marital status ( $p < .01$ ) and financial situation ( $p < .01$ ). Age was the only variable not to correlate with resilience, but this might be explained by the fact that all participants were older individuals and within a quite narrow range. In addition, resilience correlated positively with multiple work-related factors: work ability ( $p < .01$ ), job satisfaction ( $p < .01$ ) and intentions to continue working until retirement age ( $p < .05$ ). The only work-related factor not to correlate with resilience was organisational commitment. Furthermore, resilience correlated positively with all tested organisational practices: HIWP ( $p < .05$ ), perceived organisational justice ( $p < .05$ ) and supervisor support ( $p < .01$ ). Many of the practices also correlated with each others. See Table 5.

**Table 5** Characteristics of the study variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender	.90	.30	-											
2. Age	57.01	3.69	.06	-										
3. Marital status	.72	.45	-.06	-.08	-									
4. Financial situation	.62	.49	.14**	-.02	.18**	-								
5. Resilience	10.22	3.85	-.14*	.05	.19**	.20**	-							
6. Work ability	7.78	1.57	.07	-.03	.05	.16**	.21**	-						
7. Job satisfaction	4.02	.739	.02	.11*	.05	.18**	.19**	.36**	-					
8. Organisational commitment	3.50	.73	.02	.12*	.04	.18**	.02	.24**	.46**	-				
9. Continuing working until retirement	3.76	1.08	-.02	.17**	-.07	.05	.14*	.48**	.37**	.20**	-			
10. HIWP	3.32	.62	-.07	.11*	.02	.17**	.14*	.17**	.29**	.52**	.28**	-		
11. Organisational justice	3.16	.80	-.12*	.05	.03	.21**	.15*	.14**	.28**	.75**	.11*	.54**	-	
12. Supervisor's support	3.37	.94	-.13**	.06	.01	.18**	.17**	.15**	.31**	.72**	.51**	.15**	.79**	-

*Note:* Correlations (Spearman) between continuous study variables and background variables. \* $p < 0.05$ , \*\* $p < 0.01$ .  $N = 396$ . Gender: 0 = male, 1 = female. Marital status: 0 = single, 1 = in a relationship. Financial situation: 0 = very bad, bad or average, 1 = good or very good. Resilience, range 0-17, higher score indicating higher resilience. Work ability, range 0-10, higher score indicating better work ability. Job satisfaction, range 1-5, higher score indicating higher job satisfaction. Organisational commitment, range 1-5. Continuing working until retirement, range 1-5. HIWP = high-involvement work practices, range 1-5. Organisational justice, range 1-5. Supervisor's support, range 1-5.

Finally, a linear regression analysis was run to investigate further significant relationships between resilience, work-related factors and organisational practices. A stepwise method was used to analyse relationships between variables. Three models were constructed to investigate which variables might explain variation in work ability, job satisfaction and intentions to continue working until retirement age. These variables were chosen as dependent variables based on previous theory and research. As independent variables were entered resilience, work ability, perceived HIWP, organisational commitment, perceived organisational justice and perceived supervisor's support. The same independent variables were used for all three models, except for the model of work ability, in which work ability was entered as a dependent variable. Background variables (gender, age, marital status and financial situation) were entered as control variables for all the three models. Detailed results of the regression analysis, such as the standardized  $\beta$ -value and adjusted  $R^2$ , are displayed in Table 6. The n.s. abbreviation refers to a non-significant result.

Results of the regression analysis regarding the model of work ability showed that resilience, organisational commitment and gender to significantly explain work ability, with a total explanation degree of approximately 14 percent. Variance in work ability was best explained by resilience ( $\beta = .254, p < .001$ ) and organisational commitment ( $\beta = .245, p < .001$ ). Gender was the only control variable to slightly explain variance in work ability ( $\beta = .131, p < .05$ ). More detailed statistics regarding the regression model are displayed in Table 6.

Results of the regression analysis regarding the model of job satisfaction showed organisational commitment, work ability and resilience to significantly explain job satisfaction, with a total explanation degree of approximately 31 percent. Variance in job satisfaction was best explained by organisational commitment ( $\beta = .390, p < .001$ ) and work ability ( $\beta = .256, p < .001$ ). Resilience slightly explained variance in job satisfaction ( $\beta = .132, p < .05$ ). See further statistics in Table 6.

Results of the regression analysis regarding the model of intentions to continue working until retirement age showed that age, marital status, work ability and organisational commitment to significantly explain the intentions, with a total explanation degree of approximately 31 percent. Variance in intentions to continue working until retirement age was best explained by work ability ( $\beta = .470, p < .001$ ) and age ( $\beta = .181, p < .001$ ). In addition, organisational commitment ( $\beta = .145, p < .01$ ) and marital status slightly explained variance of the intentions

to continue working until retirement age ( $\beta = -.107, p < .05$ ). See Table 6 for further results.

**Table 6** Regression analysis

Independent variables	Work ability	Job satisfaction	Continuing working until retirement
Control variable	Stand. $\beta$	Stand. $\beta$	Stand. $\beta$
Gender (dummy)	.131*	n.s.	n.s.
Age	n.s.	n.s.	.181***
Marital status (dummy)	n.s.	n.s.	-.107*
Financial situation (dummy)	n.s.	n.s.	n.s.
<b>Continuous independent variables</b>			
Resilience	.254***	.132*	n.s.
Work ability		.256***	.470***
Organisational commitment	.245***	.390***	.145**
HIWP	n.s.	n.s.	n.s.
Organisational justice	n.s.	n.s.	n.s.
Supervisor's support	n.s.	n.s.	n.s.
<i>N</i>	250	247	246
<i>R</i> <sup>2</sup>	.136	.305	.311
Adj. <i>R</i> <sup>2</sup>	.126	.296	.300
<i>F</i> statistics	12.951***	35.473***	27.208***
Std. error of estimation	1.514	.617	.915
Durbin Watson	1.942	1.718	1.958

*Note:* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

To summarise results of the regression analysis, resilience was found to be significantly connected to work-ability and job satisfaction. Work ability instead was found to be significantly connected to both job satisfaction and intentions to continue working until retirement age. In addition, organisational commitment was connected to all three tested work-related factors. Background variables were significant to some extent.

## **5. DISCUSSION AND CONCLUSIONS**

The aim of this study was to examine connections between resilience, work-related factors and perceived organisational practices. Work-related factors investigated in this study included work ability, job satisfaction, organisational commitment and intentions to continue working until retirement age. The perceived organisational practices of this study included high-involvement work practices (HIWP), organisational justice and supervisor's support.

The focus was on older employees and on possible ways to retain them at work for longer. In addition, this study aimed to answer the questions of how resilient Finnish older nurses are, how common it is to experience adversities at older age and what is their level of perceived work ability and job satisfaction. Furthermore, their intentions to continue working until retirement age were investigated. Based on previous research and literature, older nurses were expected to experience a fair amount of adversities, show at least an average amount of resilience, and since resilience, work ability and job satisfaction have previously been significantly associated, at least average amounts of these work-related factors. In addition, these factors were expected to be associated with intentions to continue working until retirement age.

Based on previous research, resilience was assumed to be related to multiple work-related factors, especially to work ability and job satisfaction. Connections between resilience and organisational practices were investigated to get insight on what practices might enhance resilience and consequently enhance the wellbeing at work of older employees. Furthermore, this study aimed to present some practical implications on how to retain older employees at work for longer. In addition, based on previous research, resilience was assumed to be positively related to the organisational practices of this study, especially to HIWP and supervisor's support. Background variables, such as age, gender, marital status and financial situation, were included in the investigation.

### **5.1 Adversities and resilience among older nurses**

Results showed that experiencing adverse life events was quite common among older Finnish

nurses; only one-fifth of participants had not experienced an adverse life event during the past five years. This finding highlights the notion that older individuals experience increased amounts of adversities in life (Hildon et al., 2008). The most common adverse life event among participants was the death of a family member or a friend and both one's own adversity and that of a family member or a friend. These findings emphasize the notion that health and accident related adversities increase with older age. The stressfulness of the experienced adversities was explored as well, and most of the participants who had encountered an adverse life event perceived the event as highly stressful. Thus, it is crucial for organisations to acknowledge the significance of adversities at older age and implement practices that support the wellbeing of its older employees and enhance their resilience, to maintain good levels of wellbeing despite adversities.

Participants who had encountered an adverse life event and those who had not were compared against work-related factors and background variables, and results showed significant differences in regards to gender, financial situation and work ability. Regarding gender, women had encountered more adverse life events than men. Regarding the financial situation, participants, who perceived to have a bad or below average financial situation, had encountered more adverse life events than those, who perceived to have a better financial situation.

The work ability of individuals who had encountered an adverse life event was significantly lower than of those who had not. This is an extremely important finding, since it highlights the effect of life adversities on work ability and the transcendence between worklife and life outside of work. Adversities outside of work can have a dramatic effect on the ability to keep working and it is an important relationship to acknowledge, especially at older age with the increasing amount of adverse life events. In previous studies, older nurses are found to be at increased risk of decreases and loss of work ability (Golubic et al., 2009) and low work ability has been related to increased intentions to leave nursing (Camerino et al., 2006). Thus, good levels of work ability among nurses decrease the risk for both organisational and occupational turnover intentions as well as early retirement intentions (Salminen et al., 2016). The finding of this study highlights the importance of enhancing and taking care of employees' work ability, especially at older age, to prevent turnover and early retirement intentions. It is a crucial notion for organisations and their HR departments to understand for the retention of its older employees, which is more important than ever in this rapidly aging society.

Participants who had encountered an adverse life event, were consequently examined in regards to their resilience level and most of the participants were found to be highly resilient. This finding is in accordance with previous studies on resilience at older age (i.e. Hardy et al., 2004). This finding also confirms the notion that resilience increases with age, since individuals who have encountered multiple adversities in their lives, have grown to cope better with them and have learned a set of skills to deal with adversity (Hildon et al., 2008). Studies have shown that older individuals are over 3 times as likely to be resilient compared to younger individuals (Bonanno et al., 2007). Participants' resilience levels were consequently compared in regards to background variables and work-related factors. Among background variables, significant differences were found regarding the marital status and financial situation of individuals. Against initial assumptions, no significant differences were found in regards to age, but this might be explained by the homogeneity of the participants' age. Previous studies have shown male gender to be significantly associated with higher levels of resilience (Hardy et al., 2004), however, no significant associations in regards to gender were found in this study.

Individuals with a better financial situation were found to be more resilient than individuals who perceived their financial situation as being below average. Previous studies have argued that income is indeed a significant determinant of resilience and that individuals with less financial resources were not as likely to be resilient (Bonanno et al., 2007). Furthermore, it has been demonstrated that self-reported health varies significantly by income; on average, less than one third of older people in the lowest income category considered their health to be good (OECD, 2017). Thus, income is a very important predictor of both health and resilience and this study confirmed this notion. Income is also found to be one of the most important components of commitment for Finnish nurses (Laine et al., 2011). In the light of this notion, organisations should carefully review the implementation of wages and consider their effect on both commitment and intentions to continue working.

Results showed, in addition, that married or cohabitating participants were significantly more resilient than single, divorced or widowed participants. This finding has also been confirmed in multiple previous studies. Research has demonstrated that there is a positive relationship between the marital status of an individual and their health, especially among older individuals; married individuals demonstrating greater health and survival outcomes compared to single individuals (Goldman et al., 1995). In addition, studies have shown that

living with others is significantly associated with higher levels of resilience (Hardy et al., 2004).

In regards to work-related factors, significant differences were found only regarding the job satisfaction of nurses. More resilient individuals were found to be more satisfied with their job. This result confirms the findings of previous studies (Matos et al., 2010). This finding highlights the importance of job satisfaction for higher levels of resilience, and should be acknowledged in health care organisations, especially in these highly unpredictable times and in regards to the aging society. HR functions and managers should focus, in addition to resilience-enhancing practices, on practices increasing job satisfaction among older employees, especially since job satisfaction and decreased turnover intentions have been positively associated in previous studies (Alsarairh et al., 2014; Turner, 2014).

In addition, levels of resilience were compared by how stressful the adverse life event felt and interesting results were found. Highly resilient individuals perceived the stressfulness of events as significantly less stressful than those showing lower levels of resilience. Consequently, participants with low levels of resilience perceived events as very stressful compared to more resilient participants. Previous studies have demonstrated similar results (Hardy et al., 2004). This finding can be interpreted in two different ways or as a combination of these ways. More resilient individuals might perceive events more optimistically or they might have a greater amount of skills to deal with adversities, or more probably a combination of these two. Averagely resilient individuals resembled more the low resilient individuals in their assessment of the stressful event; thus, this result suggests that in regards to interpreting events or dealing with adversity, being averagely resilient is not enough. Therefore organisations should enhance resilience with an objective of developing highly resilient employees, and not settle for average levels of resilience.

Research has previously demonstrated that how people interpret events is essential to how they respond (Hildon et al., 2008), and resilience has been found to affect how an event is assessed (Lyon et al., 2015). In addition, it has been conceptualized as thriving in spite of adversity (Hatler & Sturgeon, 2013; Luthans et al., 2006) and as to be actively prepared to confront adversities, requiring readiness to act without knowing what will come ahead in the future (Vogus & Sutcliffe, 2007). The findings of this study are in accordance with previous research, highlighting the importance of resilience in facing life adversities. Thus, resilience



can be viewed as a crucial construct at older age for encountering life adversities and maintaining the ability to work and go on with life, despite experiencing adversities. Highly resilient individuals are, in addition, more likely to flourish in both their work-related and non-work related environment (Turner, 2014), since resilience is conceptualized as a general quality demonstrated rather consistently across multiple contexts in life (Britt et al., 2016).

## **5.2 Work ability, job satisfaction and intentions to work until retirement**

Results show that the work ability of participants was quite high, with most of the participants assessing their work ability as very high, or at least higher than average. A tenth of the participants assessed their work ability to be at the best possible level. Only a minority of participants assessed their work ability to be lower than average or as non-existing. In previous studies, older age has been related to decreased levels of work ability among nurses (Golubic et al., 2009). However, our findings suggest that Finnish older nurses perceive their work ability to be quite high or sufficient for working.

Some significant differences were found in investigating associations between work ability, background variables and work-related factors. Significant differences were found in regards to their perceived financial situation, job satisfaction, organisational commitment and intentions to continue working until retirement age. Individuals with a better financial situation had a better work ability than individuals who perceived their financial situation to be below average. Previous research has indeed showed that insufficient financial resources are associated with lower levels of work ability (Golubic et al., 2009). In addition, participants who perceived better work ability were more satisfied with their job, more committed to the organisation and intended to continue working until retirement age. This finding confirms the notion of previous studies, that low levels of work ability are associated with increased intentions to leave nursing (Camerino et al., 2006). Good levels of work ability among nurses have been found in previous studies to decrease the risk for both organisational and occupational turnover intentions as well as early retirement intentions (Salminen et al., 2016).

Job satisfaction among participants was quite high too, with most of participants assessing their job satisfaction as very high. The most common assessment was to be quite satisfied with their job, but a minority of participants perceived to be very or quite unsatisfied with

their job. This reflects the findings of previous studies on job satisfaction among nurses. The level of job satisfaction varies across countries and studies, but usually more than half of the examined nurses in studies are found to be satisfied with their job (Lu et al., 2012).

Job satisfaction among participants was also compared in regards to background variables and work-related factors. Among background variables, significant differences were found regarding the age and financial situation of individuals. Older participants were found to be more satisfied with their job than younger participants. Previous research has widely demonstrated that job satisfaction increases with age (Clark et al., 1996). Thus, the result of this study is in accordance with previous research. In addition, individuals who perceived to have a better financial situation were found to be more satisfied than individuals who perceived their financial situation to be below average. Studies have indeed shown that the salary level of Finnish nurses is one of the most fundamental factors affecting their job satisfaction (OECD, 2017)

Significant differences between job satisfaction and work-related factors were found regarding work ability, organisational commitment and intentions to continue working until retirement age. Participants who were more satisfied with their job, perceived to have a better work ability, were more committed to the organisation and had higher intentions to work until retirement age. Previous studies have indeed shown that organizational commitment is a strong predictor of job satisfaction (Kim et al., 2016). In addition, this finding is in accordance with previous studies, which have demonstrated that job satisfaction decreases turnover intentions among nurses (Alsarairh et al., 2014; Turner, 2014).

Intentions to continue working until retirement age were quite high among participants. One fifth of participants were not sure whether they would continue working until retirement age and only a minority of participants had no intentions to continue working until retirement age. Differences in intentions to continue working until retirement age were compared in regards to background variables and other work-related factors. Tested background variables included age, gender, marital status and financial situation, but no significant differences were found regarding any of these variables.

However, significant differences were found in regards to work-related factors, such as work ability, job satisfaction and organisational commitment. Participants with higher intentions to

continue working until retirement age perceived to have better work ability, were more satisfied with their job and more committed to the organisation. This finding once again highlights the importance of work ability for employee retention. However, job satisfaction and organisational commitment seem to be significant factors as well for the retention of employees. In addition, this finding highlights that background variables are not significant for the intentions to continue working, hence increasing the importance of work-related factors for the retention of older employees.

### **5.3 Resilience, work-related factors and organisational practices**

Results of this study showed that resilience correlated with almost all the tested variables. In regards to the background variables, resilience correlated significantly with gender, marital status, and financial situation. Age was the only variable not to correlate with resilience, but this might be explained by the fact that all participants were older individuals and within a quite narrow range. In addition, resilience correlated positively with multiple work-related factors: work ability, job satisfaction and intentions to continue working until retirement age. The only work-related factor not to correlate with resilience was surprisingly organisational commitment. This finding suggests that resilience and organisational commitment are entirely separate constructs, even though they are related to similar phenomena. Previous research has for example demonstrated that resilience and commitment are both essential to the willingness and capacity of maintaining a good level of work ability (Day & Gu, 2009.) In addition, commitment is found to mediate the connection between resilience and work ability (Airila et al., 2014). Results of the correlation analysis showed, in addition, that resilience correlated positively with all tested organisational practices: HIWP, perceived organisational justice and supervisor support.

Furthermore, results showed significant associations between levels of resilience and work ability. Significant differences of means were found between both low and average resilient individuals and between low and high resilient individuals, but not among high and average resilient. This finding suggests that having an average amount of resilience is already beneficial compared to showing low levels of resilience. Resilience was also found to significantly explain work ability, along with organisational commitment and gender. These findings highlight the importance of resilience in maintaining good levels of work ability and

confirm the notions of previous studies that resilience is significantly connected to good levels of work ability (Airila et al., 2014; Day & Gu, 2009).

In addition, significant associations were found between levels of resilience and job satisfaction. Similarly to the results regarding work ability, significant differences were found among both low and average resilient individuals and between low and high resilient individuals but not among high and average. Thus, suggesting again that showing average amounts of resilience are enough to keep good levels of job satisfaction. However, resilience explained job satisfaction only slightly, with organisational commitment and work ability explaining most of the variance in job satisfaction. This finding confirmed the notion of previous studies, that organizational commitment is a strong predictor of job satisfaction (Kim et al., 2016).

Surprisingly, no direct associations were found between resilience and intentions to continue working until retirement age. Age, marital status, work ability and organisational commitment were the variables significantly explaining intentions to continue working until retirement age. However, it can be assumed that resilience might have a mediating affect on intentions to continue working until retirement age, since it is significantly connected to work ability, which is consequently significantly related to the intentions of continuing working until retirement age.

Previous research shows that organisational practices are significantly related to resilience (Bardoel et al., 2014; Lengnick-Hall et al., 2011; Tugade & Fredrickson, 2004; Turner, 2014). However, in this study, significant associations between resilience and organisational practices were found only between levels of resilience and perceived support from one's supervisor. Supervisor's and manager's support has indeed been found in previous studies to have an important role in building and increasing resilience among employees (Hatler & Sturgeon, 2013; Lyons et al., 2015). Significant differences in this study were found between groups of average and high resilient individuals. Studies have demonstrated that supervisor support leads to greater employee resilience (Chiaburu et al., 2006; Day & Allen, 2004). Against initial assumptions, no differences were found in regards to HIWP or perceived organisational justice.

## 5.4 Conclusions

There is only little academic enquiry on resilience in the workplace, especially among older employees, and this study aimed to further research on this important topic. This study extended previous work concerning resilience in the work environment by examining connections between resilience and work-related factors, such as work ability, job satisfaction and intentions to continue working until retirement age and organisational practices, such as supervisor support and organisational justice.

Results showed that Finnish older nurses are relatively resilient and perceive their work ability and job satisfaction to be quite high. In addition, findings showed multiple significant relationships between resilience, work-related factors and organisational practices. Resilience was found to be positively associated with work ability and job satisfaction. Work ability instead was found to be significantly related to job satisfaction, organisational commitment and intentions to continue working until retirement age. Intentions to continue working until retirement age was also found to be significantly associated with job satisfaction and organisational commitment. In regards to organisational practices, resilience was found to be significantly associated with supervisor's support. Background variables, especially the perceived financial situation of participants, were, in addition, found to be associated with levels of resilience and work-related factors.

In the light of the increasingly challenging and unpredictable environment of health care, combined with previous research and findings of this study, resilience seems to be an extremely important construct in the work environment. Organisations should concentrate on enhancing resilience to assure work ability and job satisfaction of their employees, and through these two factors, intentions to continue working until retirement age. This study demonstrated that especially supervisor support is an important organisational practice significantly connected to high levels of resilience. In addition, the importance of resilience seems to increase dramatically with aging, since older individuals are at increased risk to encounter adversities. Considering both work-related and non-work related adversities that increase with age and the challenges posed by organisational changes and societal factors, developing resilience among older employees seems crucial for their work wellbeing and thus, for their intentions to continue working until retirement age.

## **5.5 Contributions and implications for practice**

Due to the highly challenging work environment of health care, resilience has been found to be a vital quality for nurses to cope with the negative effects of adversities. Previous research has indeed demonstrated that resilient individuals are more capable of enduring both work- and non-work-related adversities and even to thrive despite adversities (Cope et al., 2016). This study contributed to the study of adversities and resilience by confirming that resilience can act as a buffer in regards to adversities in life; highly resilient participants perceived the stressfulness of adversities as significantly lower than participants showing lower levels of resilience. Resilient nurses have, in addition, been found in previous studies to have an increased ability to adapt and keep balance in challenging and unpredictable work environments (Cope et al., 2016). Since organizations and their HR departments are seen to be capable of developing resilience (Linnenluecke, 2017), HR practitioners and managers should acknowledge the importance of resilience for dealing with adversities and challenging work environments and aim to implement resilience-enhancing practices across the whole organisation.

Adversities were found to have a dramatic affect on work ability and this is an extremely important result to acknowledge for organisations. Older individuals are already at increased risk of decrease and loss of work ability (Golubic et al., 2009) and of experiencing increased amounts of adversities in life (Hildon et al., 2008). In this study, the work ability of participants was significantly connected to both their job satisfaction and their intentions to continue working until retirement age; thus, supporting older employees is crucial for their wellbeing at work and ability and intentions to work until retirement age. Resilience instead, was found to be significantly connected to the level of work ability of participants, thus, implementing resilience-enhancing practices across organisations seems to be vital for the functioning of employees and consequently of the whole organisation. Resilience has been viewed in previous studies as essential to the willingness and capacity of maintaining good levels of work ability (Day & Gu, 2009).

The high workload and stressful environment inherent to nursing causes increased turnover and significantly affects nurses' wellbeing, work ability and job satisfaction (Golubic et al., 2009). The decrease of work ability combined with recruitment challenges and the retirement

of experienced nurses is expected to lead to a shortage of qualified nurses in the near future (Cope et al., 2016.) Also job dissatisfaction has been associated with increased turnover intentions (Turner, 2014). The nursing shortage is indeed one of the most pressing concerns in healthcare at the moment (Salminen et al., 2016) and health care organisations should do their best to understand nursing turnover and early retirement intentions, and seek to implement practices aimed at retaining nurses at work for longer while striving to help them maintain good levels of work ability and wellbeing.

In previous studies, low levels of work ability have been related to increased intentions to leave nursing (Camerino et al., 2006), as well as low levels of job satisfaction (Alsarairh et al., 2014; Turner, 2014). This study confirmed these notions. Thus, good levels of work ability and job satisfaction among nurses decrease the risk for both organisational and occupational turnover intentions as well as early retirement intentions (Salminen et al., 2016). In addition, resilience has been seen as an essential quality regarding nursing longevity and retention; resilient nurses experience less work-related stress and work for longer as healthy nurses (Airila et al., 2014). The findings of this study highlight the importance of resilience for keeping good levels of both work ability and job satisfaction and the importance of these two work-related factors for intentions to continue working until retirement age. Organisations, especially HR practitioners and managers, have the responsibility of identifying practices that increase the job satisfaction, work ability and commitment of older employees, and implementing those practices throughout the organisation (Zaniboni et al., 2015). Thus, HR functions and managers have a key role in the wellbeing of older employees and their retention.

Supervisor's support was identified as being an organisational practice significantly connected to resilience. This confirms the finding of previous studies of the significant relationship between supervisor support and resilience (Chiaburu et al., 2006; Day & Allen, 2004; Lyons et al., 2015). Supervisors have, in addition, been found in previous studies to have an important role in identifying the needs of employees and finding solutions to support and encourage older employees (Zaniboni et al., 2015). Thus, organisations should aim to train and support supervisor's and make sure they understand the importance of their work for the resilience of employees. Supervisors should aim to enhance their ability to enhance resilience through support practices and understand the needs of older employees.

## 5.6 Limitations and suggestions for future research

Although this study benefits from a large sample, it has several limitations as well, which need to be acknowledged and considered when interpreting the results. These limitations should, in addition, be addressed in future research. First, because of the cross-sectional setting of this study, employees' subjective experiences, intentions and evaluations were investigated, instead of actual behaviour. The cross-sectional design does not entail possibilities to draw causative conclusions between variables. Therefore, a longitudinal study design is necessary to confirm the causality of analysed variables. Secondly, as the data were reported only by self-reports and by the respondents, thus, self-reported bias might have an influence on results. Thus, in addition, it is assumed that participants were honest and understood the asked questions as intended. In addition, data were gathered with a single questionnaire, which makes the data vulnerable to common method bias, thus, having possibly inflated the magnitude of the relationships between the studied phenomena (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). Nevertheless, there is evidence to show that common method bias is more likely to deflate rather than inflate connections (Evans, 1985).

Thus, a cross-sectional study is not ideal in studying adaptation processes, such as resilience. The possibility cannot be ignored that employees' general wellbeing or different antecedents affect their evaluations. Future research should investigate resilience and HR practices from a longitudinal aspect. In addition, the participants consisted of nurses working in one Finnish University Hospital, and thus, the results can only be generalised to a limited extent. Furthermore, this study concentrated on participants' perceptions and experiences, which are viewed as a strength, however, an organisation-level study focusing on actual organisational practices is also needed.

Some limitations to the study of resilience poses the notion that resilience has been conceptualized in a variety of ways and rather differently across studies, with multiple research streams using their own definitions, conceptualizations and theories of resilience (Britt et al., 2016; Fletcher & Sarkar, 2013; Linnenluecke, 2017). Similarities and differences among these different conceptualizations have not been explored and no generalizable principles for developing resilience have been gathered to clarify the conceptualization of



resilience across studies. The differences in conceptualizations and definitions make it difficult to assess and compare findings of resilience research, hinder meta-analysis, and make it hard to operationalize resilience. Therefore, it is crucial for researchers to clearly define their conceptualizations and provide a rational reasoning for their used conceptualization. Clarification and conceptual unification of resilience are needed for future research. (Fletcher & Sarkar, 2013.) In addition to the recommendation to clarify and unite the terminology around resilience and other related terms, it is suggested that the role of time in studies should be clarified as well (Britt et al., 2016).

In addition, this study investigated only adversities experienced outside of the work environment and it would be interesting to study what kind of work-related stressful events are experienced by older employees and to what extent. Future research on older employee resilience should indeed aim to investigate work-related adversities as well, to better comprehend the entirety of adversities experienced by older employees.

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# APPENDIX

## APPENDIX 1: Research questionnaire

JYVÄSKYLÄN YLIOPISTO  
GERONTOLOGIAN TUTKIMUSKESKUS JA TERVEYSTIETEIDEN TIEDEKUNTA  
TYÖTERVEYSLAITOS

**Ikääntyneiden työurat –  
työssä jatkaminen ja eläkkeellä työskentely**

### KYSELYTUTKIMUS

Olkaa hyvä ja täyttäkää lomake huolellisesti ja vastatkaa jokaiseen kysymykseen joko rastittamalla oikean vaihtoehdon numero tai kirjoittamalla kysytty tieto sille varattuun tilaan. Kaikki antamanne tiedot käsitellään luottamuksellisina, ja ne tulevat ainoastaan tämän projektin tutkijoiden tietoon Jyväskylän yliopistossa. Tutkimustulokset raportoidaan niin suurina ryhminä ja sellaisessa muodossa, että kaikkien tutkimukseen osallistuneiden henkilökohtaiset mielipiteet pysyvät salassa. Tutkimukseen osallistuminen on vapaaehtoista ja siitä voi jättäytyä pois milloin vain.

**PYYDÄMME TEITÄ PALAUTTAMAAN  
TÄYTETYN LOMAKKEEN JA  
ALLEKIRJOITETUN TUTKIMUSTIEDOTTEEN  
OHEISESSA VASTAUSKUURESSA  
SAIRAALAN SISÄPOSTIIN SEURAAVAN  
KAHDEN VIIKON KULUESSA  
– KIITOS**

## 1. SUKUPUOLENNE

- 1) nainen
- 2) mies

## 2. IKÄNNE \_\_\_\_\_ vuotta

## 3. SIVIILISÄÄTYNNE

- 1) naimaton
- 2) naimisissa/rekisteröity parisuhde
- 3) avoliitossa
- 4) eronnut, ei uudelleen avioitunut tai parisuhteessa
- 5) leski, ei uudelleen avioitunut tai parisuhteessa

## 5. MIKÄ ON AMMATILLINEN KOULUTUKSENNE?

- 1) ei ammatillista koulutusta
- 2) ammattikurssi/työpaikalla saatu koulutus
- 3) ammattikoulu
- 4) opistotason tutkinto (esim. kauppaopisto)
- 5) ammattikorkeakoulu
- 6) yliopisto/korkeakoulu
- 7) muu, mikä? \_\_\_\_\_

## 6. MIKÄ ON NYKYINEN AMMATTINNE TAI TYÖTEHTÄVÄNNE? (Merkitkää ammattinimike tarkasti)

\_\_\_\_\_

## 7. KUINKA MONTA VUOTTA OLETTE

- a) ollut ansiotyössä? \_\_\_\_\_ vuotta
- b) työskennellyt nykyisessä työpaikassanne? \_\_\_\_\_ vuotta
- c) työskennellyt nykyisessä tehtävässänne? \_\_\_\_\_ vuotta

## 8. MILLAINEN ON TYÖSUHTEENNE?

- 1) kokoaikainen/vakinainen
- 2) osa-aikainen/vakinainen
- 3) kokoaikainen/määräaikainen
- 4) osa-aikainen/määräaikainen
- 5) tilapäinen
- 6) muu, millainen? \_\_\_\_\_

## 9. TYÖSKENTELEN:

- 1) perushoitajana, lähihoitajana
- 2) mielisairaanhoitajana, mielenterveyshoitajana
- 3) sairaanhoitajana
- 4) erikoissairaanhoitajana
- 5) osastonhoitajana/vastaavana hoitajana

## 15. MINKÄLAINEN ON PERHEENNE/RUOKAKUNTANNE TÄMÄNHETKINEN TALOUDELLINEN TILANNE?

- 1) erittäin huono
- 3) melko huono
- 4) tyydyttävä
- 2) melko hyvä
- 1) erittäin hyvä

## 18. TYÖPAIKASSANNE, MISSÄ MÄÄRIN

	Erittäin paljon	Melko paljon	Ei paljon eikä vähän	Melko vähän	Erittäin vähän
1) jokainen voi todella parantaa taitojaan	5	4	3	2	1

2) työntekijät ovat selvillä työhön vaikuttavista asioista	5	4	3	2	1
3) osallistutaan ja koetaan työprosessi omaksi	5	4	3	2	1
4) vallitsee tiimi- ja yhteistyön ilmapiiri	5	4	3	2	1
5) työntekijöiden ja esimiehen välillä vallitsee luottamus	5	4	3	2	1
6) rohkaistaan tekemään asioita uusilla ja paremmilla tavoilla	5	4	3	2	1
7) työntekijät voivat toimia niin tehokkaasti kuin pystyvät	5	4	3	2	1
8) palkitaan tuotteiden ja asiakaspalvelun korkeasta laadusta	5	4	3	2	1
9) tiedetään missä määrin työ edistää yrityksen tavoitteita	5	4	3	2	1
10) pyritään selvittämään työntekijöiden mielipiteitä ja näkemyksiä	5	4	3	2	1

## 19. MILLAISTA ON TOIMIPAIKKANNE ESIMIESTYÖ JA PÄÄTÖKSENTEKO?

	Täysin samaa mieltä	Joks. samaa mieltä	Ei samaa eikä eri mieltä	Joks. eri mieltä	Täysin eri mieltä
1) kaikkia kohdellaan samojen sääntöjen ja periaatteiden mukaan	5	4	3	2	1
2) kaikilla on oikeus tulla kuulluksi omassa asiassa	5	4	3	2	1
3) päätöksenteko on puolueetonta	5	4	3	2	1
4) päätökset perustuvat oikeaan tietoon	5	4	3	2	1
5) päätökset ovat korjattavissa	5	4	3	2	1
6) päätöksenteon periaatteet ovat selkeät ja kerrottu niille, joita ne koskevat	5	4	3	2	1
7) saamani palkkiot kuvastavat panostustani työhön ja työpaikkaan	5	4	3	2	1
8) saamani palkkiot kuvastavat työni sisältöä	5	4	3	2	1
9) saamani palkkiot ovat oikeudenmukaisia suoriutumisen kannalta	5	4	3	2	1
10) esimieheni kohtelee minua arvostavasti ja kunnioittavasti	5	4	3	2	1
11) esimieheni on suora ja rehellinen	5	4	3	2	1
12) esimieheni ei esitä sopimattomia huomautuksia	5	4	3	2	1

## 20. MISSÄ MÄÄRIN ESIMIEHENNE

	Erittäin paljon	Melko paljon	Ei paljon eikä vähän	Melko vähän	Erittäin vähän
1) tukevat ja rohkaisevat alaisiaan	5	4	3	2	1
2) keskustelevat alaiensa kanssa	5	4	3	2	1
3) arvostavat alaiensa työtä	5	4	3	2	1
4) auttavat tarvittaessa alaisiaan työssä	5	4	3	2	1

## 21. MISSÄ MÄÄRIN SEURAAVAT VÄITTEET PITÄVÄT PAIKKANSA KOHDALLANNE?

	Erittäin paljon	Melko paljon	Ei paljon eikä vähän	Melko vähän	Erittäin vähän
1) olen ylpeä voidessani kertoa, että työskentelen tässä yrityksessä	5	4	3	2	1
2) minun arvoni ja yrityksen arvot ovat hyvin samanlaisia	5	4	3	2	1
3) kun teen työtä, haluan tuntee ponnistelevani paitsi itseni myös tämän yrityksen hyväksi	5	4	3	2	1
4) olen halukas keskimääräistä suurempiin ponnistuksiin auttaakseni yritystä menestymään	5	4	3	2	1
5) vaikka minulle tarjottaisiin enemmän palkkaa muualla, en harkitsisi työ- paikan vaihtoa	5	4	3	2	1
6) vaikka yrityksellä menisi taloudellisesti huonosti, en haluaisi vaihtaa työpaikkaa	5	4	3	2	1

30. OLETETAAN, ETTÄ TYÖKYKYNNE ON PARHAIMMILLAAN SAANUT 10 PISTETTÄ. MINKÄ PISTEMÄÄRÄN ANTAISITTE NYKYISELLE TYÖKYVYLLENNE? (0 tarkoittaa sitä, ettette nykyisin pysty lainkaan työhön)

0	1	2	3	4	5	6	7	8	9	10
↑										↑
Täysin työkyvytön										Työkyky parhaimmillaan

41a. MIKÄ ON OLLUT KAIKKEIN STRESSAAVIN TAPAHTUMA TEIDÄN ELÄMÄSSÄNNE VIIMEISEN 5 VUODEN AIKANA?

1. Oma sairaus/vamma/tapaturma
2. Puolison tai lapsen sairaus/vamma/tapaturma
3. Puolison tai lapsen kuolema
4. Läheisen sairaus/vamma/tapaturma
5. Läheisen kuolema
6. Avioero/muutto erilleen puolisosta
7. Kaltoin kohtelu/vaaratilanne/henkinen tai fyysinen uhka
8. Taloudellinen ahdinko
9. Muutto
10. Muu tapahtuma, mikä \_\_\_\_\_
11. Ei ole tapahtunut mitään erityisen stressaavaa (Siirtykää kohtaan 43.)

41b. MITEN STRESSAAVAKSI KOITTE TAPAHTUMAN? ARVIOIKAA TILANNETTANNE ASTEIKOLLA 1-10, JOSSA 1 TARKOITTAÄ, ETTÄ TAPAHTUMMA EI OLLUT MIELESTÄNNE ERITYISEN STRESSAAVA JA 10, ETTÄ TAPAHTUMA OLI MIELESTÄNNE ERITTÄIN STRESSAAVA.

0	1	2	3	4	5	6	7	8	9	10
↑										↑
Ei erityisen stressaavaksi										Erittäin stressaavaksi

42. AJATELKAA MAINITSEMAANNE STRESSAAVINTA TAPAHTUMAA JONKA OLETTE KOKENUT VIIMEISEN 5 VUODEN AIKANA. ÄLKÄÄ HUOMIOIKO TAPAHTUMIA VIIMEISEN KUUKAUDEN AJALTA.

a) KUINKA PALJON HUONOMMAKSI TUNSIITTE OLLONNE TAPAHTUMAN JÄLKEEN

VERRATTUNA MILLAINEN OLONNE OLI ENNEN TAPAHTUMAA??

1. Erittäin paljon huonommaksi
2. Paljon huonommaksi
3. Jonkin verran huonommaksi
4. Ei ollenkaan huonommaksi

b) KUINKA PALJON LANNISTUNEEMMAKSI TUNSI ITSENNE TAPAHTUMAN JÄLKEEN?

1. Erittäin paljon
2. Paljon
3. Jonkin verran
4. Ei ollenkaan

c) KUINKA PALJON VAIKEAMPAA OLI HOITAA JOKAPÄIVÄISIÄ ASIOITA TAPAHTUMAN JÄLKEEN?

1. Erittäin vaikeaa
2. Vaikeaa
3. Jonkin verran vaikeaa
4. Ei ollenkaan vaikeaa

d) KUINKA KAUAN TAPAHTUMAN JÄLKEEN ALOITTE VOIDA PAREMMIN?

1. Muutama päivä
2. Muutama viikko
3. Muutama kuukausi
4. Vuosi
5. Yli vuoden
6. En voi paremmin

e) KUINKA PALJON TAPAHTUMASTA ON KULUNUT AIKAA?

1. Yksi kuukausi
2. Alle puoli vuotta
3. Puoli vuotta - kaksi vuotta
4. Enemmän kuin kaksi vuotta

f) OLETTEKO TAPAHTUMAN JOHDOSTA LOPETTANUT JOIDENKIN TEILLE TÄRKEIDEN ASIOIDEN TEKEMISEN?

1. Kyllä
2. Ei

g) OLETTEKO ALKANEET TAPAHTUMAN JOHDOSTA TEKEMÄÄN JOITAIN ASIOITA, JOISTA ON TULLUT TEILLE TÄRKEITÄ?

1. Kyllä
2. Ei

h) ONKO TAPAHTUMA MUUTTANUT SUHTAUTUMISTANNE ELÄMÄÄNNE PYSYVÄSTI?

1. Kyllä
2. Ei (Mikäli ei, voitte siirtyä kysymykseen 43.)

i) ONKO SUHTAUTUMISENNE MUUTTUNUT PAREMPAAN VAI HUONOMPAAN SUUNTAAN?

1. Parempaan
2. Huonompaan \_\_\_\_\_

51. KUN AJATTELETTE NYKYISTÄ AMMATTIANNE, MISSÄ MÄÄRIN SEURAAVAT VANHUUSELÄKKEELLE SIIRTYMISEEN LIITTYVÄT ASIAT PITÄVÄT PAIKKANSA KOHDALLANNE?

	Pitää täysin paikkan.	Pitää joks. paikkan.	En osaa sanoa	Ei juurikaan pidä paikkan.	Ei pidä lainkaan paikkan.
1) Haluan jatkaa työssäni vanhuuseläkkeelle asti	5	4	3	2	1
2) Terveyteni puolesta pystyn työskentelemään vanhuuseläkkeelle asti	5	4	3	2	1
3) Uskon, että itselläni on töitä eläkeikään asti	5	4	3	2	1

## 63. MITEN TYYTYVÄINEN TAI TYYTYMÄTÖN OLETTE

	Erittäin tyyty- väinen	Melko tyyty- väinen	Ei tyytyv. eikä tyytym.	Melko tyyty- mätön	Erittäin tyyty- mätön
1) nykyiseen työhönne	5	4	3	2	1