

Investigating the links between resilience, perceived HRM practices, and retirement intentions

Abstract

Purpose – Human resource management (HRM) scholars’ interest in older employees’ resilience has only recently started to emerge. Little is known about how resilience and perceived HRM are linked to different retirement intentions. Drawing on the conservation of resources (COR) and social exchange theories, this study investigates the links between perceived HRM practices, resilience, and retirement intentions. Additionally, the paper examines the possible mediating role of resilience in the relationship between perceived HRM practices and retirement intentions.

Design/Methodology/Approach – In 2016, a cross-sectional study was conducted among older (50+) nursing professionals working in a Finnish university hospital. Statistical methods, including mean comparisons and linear and logistic regression analyses, were used to analyze the data.

Findings – The results indicated that resilience partly mediated the relationship between perceived HRM practices and early retirement intentions, and fully mediated the association between perceived HRM practices and intentions to continue working after retirement age.

Originality – This study produces new knowledge regarding the links between resilience, perceived high involvement work practices (HIWPs) and retirement intentions.

Keywords Resilience, HRM, older employees, retirement intentions, healthcare, Finland

Paper type Research paper

Introduction

Dynamic and turbulent working environments require resilience not only from individual employees, but also from groups and organizations (Britt *et al.*, 2016; King *et al.*, 2016). Resilience describes an individual's ability to recover from life's hardships (Bardoel *et al.*, 2014, p. 280). In a work context, this can mean an individual's ability to adapt to changes and bear uncertainties (Shin *et al.*, 2012). Organizations, on the other hand, may encounter environmental challenges, terrorist attacks, and financial setbacks (Linnenluecke, 2017, p. 4). One of the current megatrends influencing working life is population aging (Sonnet *et al.*, 2014). In many countries, there is continuing pressure to increase the official retirement age and prevent individuals from exiting working life early (Sonnet *et al.*, 2014). In Finland, the pension reform act enacted at the beginning of 2017 aims to gradually increase the retirement age of employees due to increasing life expectancy (<https://www.tyoelake.fi/en/>).

Context of the study

Evidence indicates that older employees continue to work longer in many countries (Pensions at a Glance 2017). In Finland, more employees than ever are considering working after the official retirement age (Tenhunen, 2017). However, the increasing official retirement age, together with challenges faced in working and private life, can be burdensome (Brandan *et al.*, 2013/2014). In working life, age discrimination can negatively influence older employees' willingness to continue working, "pushing" them into early retirement (Bayl-Smith and Griffin, 2014, p. 589), as can changing work demands (Sterns and Dawson, 2012). Adversities faced outside working life may include illness or injury (Sterns and Dawson, 2012) or the death of a loved one (Smith and Hayslip Jr., 2012). Resilience is an important attribute that enables individuals to cope with adversities (Britt *et al.*, 2016), including uncertainties related to contemporary careers (Lyons *et al.*, 2015) and the current turbulent working environment

(Bardoel *et al.*, 2014; Luthans *et al.*, 2006). Consequently, it can be posited that resilience could enhance older employees' abilities to cope with the challenges faced in later life (Sterns and Dawson, 2012; Brandan *et al.*, 2013/2014).

Research objectives and expected contribution

The global scarcity of nursing professionals and the growing need for healthcare services because of the greying society highlight the need to retain older nursing professionals in the workforce as long as possible (Armstrong-Stassen *et al.*, 2015). Relying on a resource approach regarding retirement (see Wang, 2007), this study investigates how perceived HRM practices and resilience, as organizational and individual resources, are associated with different retirement intentions among older (50+) nursing professionals. The contribution of this study is threefold. First, it investigates the linkage between perceived HRM practices and employee resilience, thereby contributing to the HRM field, where studies focusing on employees' resilience have just started to emerge (Bardoel *et al.*, 2014; Cooke *et al.*, 2016). Second, this study investigates the association of resilience with older employees' retirement intentions. Although several positive issues are associated with employee resilience, such as emotional stability (Bonanno *et al.*, 2007) and performance (Luthans *et al.*, 2005; see, Luthans *et al.*, 2006), few studies focus on the significance of resilience for older employees' retirement intentions. Consequently, this study contributes to the growing academic inquiry into the attitudinal and behavioral outcomes of employee resilience (King *et al.*, 2016). Third, this study investigates the possible mediating role of employee resilience in the relationship between perceived HRM practices and retirement intentions. Thus far, only a few HRM studies have investigated this matter (Cooke *et al.*, 2016; Shin *et al.*, 2012).

Concepts of the study

The definitions and operationalizations of resilience vary (Linnenluecke, 2017; Britt *et al.*, 2016). In general, resilience is described as an individual's ability to "bounce back" under difficult circumstances (Smith and Hayslip Jr., 2012, p. 5). In practice, this may mean an individual's ability to avoid burnout or depression during an adverse life situation (Chen *et al.*, 2015, p. 96). In other words, resilience describes an individual's ability to maintain one's functioning as well as recover from adverse life events (Hardy *et al.*, 2004).

Resilience has two components: psychological and behavioral (Chen *et al.*, 2015). The former refers to mental wellbeing, whereas the latter relates to how an individual functions in adverse situations (Chen *et al.*, 2015). Similarly, Britt *et al.* (2016, p. 378) distinguish between the capacity and the demonstration of resilience. The former refers to the ability to adapt to adverse situations positively. As an individual-level ability, resilience is a part of an individual's psychological capital (PsyCap) and is a resource that can be further developed (Britt *et al.*, 2016). For example, personal, familial, community, and organizational factors can provide an individual with resources for resilience (Britt *et al.*, 2016, p. 380). The demonstration of resilience, on the other hand, describes how an individual has been able to adapt to an adverse situation (Britt *et al.*, 2016). The demonstration of resilience has been measured in empirical studies by investigating an individual's mental health after an adverse event (Britt *et al.*, 2016; Bonanno *et al.*, 2007). Yet, different researchers hold diverse views regarding whether resilience means only the ability to recover from difficult events or if it also refers to positive growth after those events (Britt *et al.*, 2016; Luthans *et al.*, 2006). It is also unclear how an individual's current level of resilience indicates his or her ability to cope with future challenges and adversities (Britt *et al.*, 2016). The focus of this study is on individual-level resilience, instead of group- or organization-level resilience. Furthermore, resilience is defined as an individual's response to adverse life situations in line with Hardy *et al.*'s (2004, p. 260) study.

Broadly speaking, HRM practices cover all the organizational activities aiming to maintain, develop and strengthen the human capital of the organization (Veth *et al.*, 2017, p. 2). In this study, the focus is on so-called high involvement work practices (HIWPs) which are seen to enhance employees' abilities, motivation, and performance (Kooij *et al.*, 2013), and thereby potentially strengthening individual-level resilience (Cooke *et al.*, 2016) as well as hindering the resource deterioration of older employees (von Bonsdorff *et al.*, 2018).

In terms of retirement intentions, both intentions for early retirement and intentions to continue working after retirement age are investigated in this study. Older employees' early and late retirement intentions have been investigated in a similar manner, for example, in the study of Topa and Alcover (2015).

Theoretical framework and hypotheses

The interest toward resilience is related to the Positive Psychology Movement (Smith and Hayslip Jr., 2012), and the theoretical background of studies concerning employees' resilience have often relied on the conservation of resources (COR) (Bardoel *et al.*, 2014) and PsyCap theories (Luthans *et al.*, 2006). The first wave of resilience research investigated individual traits associated with resilience, whereas the second wave of resilience studies acknowledged that resilience is more "state-like" and can be developed. Furthermore, recent resilience research has paid attention to the resilience process and how different individual and contextual factors contribute to it (King *et al.*, 2016; Hildon *et al.*, 2008; Luthans *et al.*, 2006).

Early resilience research focused primarily on children and adolescents, and how they survived the adversities they encountered during the early years of their lives (Hildon *et al.*, 2008; King *et al.*, 2016). Recently, gerontologists have begun to pay attention to resilience in older age (Hildon *et al.*, 2008). However, surprisingly little attention has been given to resilience in the workplace, especially in the context of retaining employees (King *et al.*, 2016; Luthans *et al.*,

2006). Resilience studies focusing on employees' resilience have been conducted primarily among military personnel because they are likely to encounter adverse situations in their profession (Britt *et al.*, 2016; King *et al.*, 2016). However, Britt *et al.* (2016, p. 382) argue that resilience studies should also investigate different occupations, especially those of first responders, such as police officers, firefighters, and medical employees. For instance, nursing professionals are likely to face different kinds of adversities due to their occupation, such as patients' pain and death as well as work overload, role conflicts and aggression (Kossek and Perrigino, 2016, p. 750; Yilmaz, 2017, p. 10).

Recently, resilience has been linked to the discussion of late-career challenges (Brandan *et al.*, 2013/2014). Employees with high work and career resilience are expected to be confident about their future opportunities and their abilities to confront adverse work situations (Hennekam, 2015). For example, Lyons *et al.*'s (2015) study demonstrated that career resilience was positively related to an individual's career success. It has been postulated, based on lifespan theories, that an individual's response to stress factors, such as adverse work situations, may change as individuals age (Mauno *et al.*, 2013, p. 411). Mauno *et al.*'s (2013) study showed that older employees were more resilient under heavy workloads and during work-family conflicts compared to younger employees. This result indicates that older employees can regulate their feelings better than younger ones (Mauno *et al.*, 2013). It is also possible that older employees learn coping strategies during their careers, allowing them to get through difficult situations (Mauno *et al.*, 2013). However, Mauno *et al.*'s (2013) study demonstrated that younger employees coped better with job insecurity compared to older employees, partly because they were more confident about finding new jobs compared to older employees.

When it comes to adverse situations, the severity of the events involved has been defined and measured differently in previous studies (Hildon *et al.*, 2008). For example, Britt *et al.* (2016,

p. 381) argued that common work-related stress factors, such as work overload or job ambiguity, do not necessarily meet the criteria for an adverse situation. Other resilience studies have focused on cumulative adversity (the total number of stressful life events) (e.g., Ezeamama *et al.*, 2016, p. 1007). Ageist practices in the workplace, career plateauing, and uncertainties in the workplace are examples of the adversities older employees may face in working life (Brandan *et al.*, 2013/2014). Similarly, one's own or a loved one's sickness or injury and divorce are forms of adversities that older employees may undergo in their private life (Sterns and Dawson, 2012). Hildon *et al.* (2008) argued that during older age, individuals are likely to face adversities, such as illness, but it does not mean that they cannot maintain a reasonable quality of life. Therefore, they have defined resilience as "flourishing despite adversity" (Hildon *et al.*, 2008, p. 728). This study uses the scale developed by Hardy *et al.* (2004), focusing on the most stressful forms of adversity (health-related or other) older nursing professionals have encountered during the previous five years.

Resource perspective on retirement intentions

This study takes a resource perspective on retirement in investigating how perceived HRM practices and resilience are associated with different forms of retirement intentions (Wang, 2007; Armstrong-Stassen *et al.*, 2012). The resource perspective on retirement relies on the COR theory (Wang, 2007; Armstrong-Stassen *et al.*, 2012). The COR theory has been widely used in the fields of organizational and occupational psychology to investigate individuals' work-related attitudes and behaviors, including resilience and retirement intentions (Chen *et al.*, 2015; Gorgievski *et al.*, 2011; Wang, 2007; Armstrong-Stassen *et al.*, 2012). Resources are at the center of the COR theory, and, according to this theory, individuals constantly aim to protect and safeguard their resources (Chen *et al.*, 2015). The COR theory implies that individuals require suitable resources to be resilient (Chen *et al.*, 2015). These resources can be

tangible (e.g., a house or car) or other (e.g., marriage, employment, skills, and self-esteem) (Chen *et al.*, 2015, p. 97). Loss of resources can cause a “loss spiral” with negative consequences, whereas gaining resources is likely to foster a “gain spiral,” with positive outcomes (Chen *et al.*, 2015, p. 97).

In the present study, HRM practices are considered resources provided by the employer organization, whereas resilience reflects an individual’s personal resources (Cooke *et al.*, 2016). The social exchange theory, which focuses on the exchange of resources in an employee–organization relationship (Gorgievski *et al.*, 2011), has often been applied to explain the association between HRM practices and an individual’s retirement intentions (Kooij *et al.*, 2013; Armstrong-Stassen *et al.*, 2015). According to this view, HRM practices are likely to enhance an employee’s positive work-related attitudes and behaviors since HRM practices reflect the value an employer places on their employees (Kooij *et al.*, 2013; Alfes *et al.*, 2013; Kuvaas, 2008). For example, the study of Veth *et al.* (2017) showed that perceived availability and use of HRM practices were positively associated with employability among different aged employees. In line with COR theory and social exchange theory, it can be expected that HRM practices such as HIWPs practices can safeguard older employees from resource deterioration (Kooij *et al.*, 2013; von Bonsdorff *et al.*, 2018) and enhance their abilities to continue working until retirement and beyond.

Conversely, poor working arrangements and working environments are considered antecedents of early retirement (Topa *et al.*, 2018; Dal Bianco *et al.*, 2015). It is unclear whether direct links exist between perceived HRM practices and different forms of withdrawal intentions, such as retirement intentions (Armstrong-Stassen *et al.*, 2015). Some evidence exists indicating that perceived HRM practices are negatively associated with early retirement intentions. For

example, Herrbach *et al.*'s study (2009) demonstrated that training opportunities were negatively related to early retirement intentions among late-career managers. Thus, this study hypothesizes the following:

Hypothesis 1a: Perceived HIWPs are negatively associated with early retirement intentions.

Hypothesis 1b: Perceived HIWPs are positively associated with intentions to continue working after the official retirement age.

The linkage between HRM and resilience

Recently, academic interest in the relationship between management and resilience (Kossek and Perrigino, 2016) and especially between HRM and resilience has grown (Britt *et al.*, 2016; Cooke *et al.*, 2016; Bardoel *et al.*, 2014; Luthans *et al.*, 2006). In line with the COR theory, a supportive working environment, social networks and HRM practices can be considered work-related resources, which can hinder employees' work-related strain and reinforce their resilience (Kossek and Perrigino, 2016; Yilmaz, 2017; Cooke *et al.*, 2016). Luthans *et al.* (2006) argued that, when it comes to improving employee resilience (as well as other forms of positive PsyCap), both proactive and reactive HRM practices should be used. The former refers to resilience training, whereas the latter can mean, for instance, grief counseling (Luthans *et al.*, 2006; see Bardoel *et al.*, 2014, 281). Bardoel *et al.* (2014, p. 283–284) identified numerous HRM practices important for strengthening employees' resilience, including 1) the development of social supports at work; 2) work-life balance practices; 3) employee assistance programs; 4) employee development programs (including resilience and mindfulness training); 5) flexible work arrangements, rewards, and benefits systems; 6) occupational health and safety systems; 7) risk and crisis management systems; and 8) diversity management. This study

follows Cooke *et al.* (2016), focusing on the importance of HIWPs for employee resilience instead of investigating only a few HRM practices. Thus, this study postulates that HIWPs can enhance an individual's resources (Cooke *et al.*, 2016) and are, therefore, positively associated with employee resilience. Consequently, this study hypothesizes the following:

Hypothesis 2: Perceived HIWPs are positively related to resilience.

The association between resilience and retirement intentions

Several positive, employee-level outcomes are associated with resilience. For example, a positive association between an individual's resilience and performance has been found (Luthans *et al.*, 2005; see, Luthans *et al.*, 2006, p. 38). Additionally, good self-rated health is positively related to employee resilience (Ezeamama *et al.*, 2016; Hardy *et al.*, 2004). A positive association between resilience and physical activity was found among healthcare and insurance employees (Gerber *et al.*, 2014; see, Thogersen-Ntoumani *et al.*, 2017). Resilience is also positively associated with organizational commitment and negatively with burnout (Meng *et al.*, 2017). Less is known about how resilience relates to employee retention (Luthans *et al.*, 2006, 38) and retirement (Hildon *et al.*, 2008). Hildon *et al.*'s (2008) study showed that resilient individuals were satisfied with their retirement process and possibilities for gradual retirement, indicating that resilient individuals had more control over their retirement process compared to less resilient ones. In line with the COR theory, this study postulates that older employees who are more resilient are likely to continue working until retirement age and beyond. In other words, resilience can prevent loss of resources or can enable employees to gain more resources (King *et al.*, 2016, p. 784). Thus, this study hypothesizes the following:

Hypothesis 3a: Resilience is negatively associated with early retirement intentions.

Hypothesis 3b: Resilience is positively associated with intentions to continue working after the official retirement age.

Resilience as a mediator

Based on the COR theory, it is likely that HIWPs provided by the organization enhance an individual's resilience, which, in turn, is positively related to an individual's intention to continue working until retirement age and beyond (von Bonsdorff *et al.*, 2018). Shin *et al.* (2012, p. 730), draw on the COR theory, as they argue that the resources provided by the organization are likely to enable employees to cope with work challenges. Similarly, some HRM studies, relying on the social exchange theory, indicate that perceived HRM practices may not directly influence an individual's behavior (such as retirement intentions); rather, there are possible mediating (or moderating) factors, such as work-related attitudes (Alfes *et al.*, 2013; Kuvaas, 2008). However, the possible mediating role of resilience in the association between perceived HRM practices and retirement intentions has received little attention. For example, Cooke *et al.*'s (2016) study showed that resilience mediated the relationship between HIWPs and employee engagement. This study hypothesizes the following:

Hypothesis 4a: Resilience mediates the relationship between perceived HIWPs and early retirement intentions.

Hypothesis 4b: Resilience mediates the relationship between perceived HIWPs and intentions to continue working after the official retirement age.

The hypothesized relationships between perceived HIWPs, resilience, and retirement intentions are presented in Figure 1.

Please insert Figure 1 about here.

Methodology

The data for this study were collected as a part of *Work careers of older workers—continued participation and bridge employment*, a study at the Gerontology Research Centre (GEREC) at the University of Jyväskylä, Finland. Total population sampling was used for this study. Total population sampling is a purposive sampling technique in which the whole population, which meets the specific criteria, is studied (Etikan *et al.*, 2016, 3). A survey was targeted to all nursing professionals working at one Finnish university hospital who were 50 years old and older. A total of 962 questionnaires were sent to the relevant nursing professionals via the hospital's internal post in the spring of 2016. One reminder was sent. In all, 396 questionnaires were returned (41% response rate). The Ethical Committee at the University of Jyväskylä and the studied hospital approved this study. We also obtained informed consent from the participants.

Demographic characteristics

The majority of the respondents were female (90%) (see Table 1), which represents the general distribution of gender in the Finnish healthcare field. In Finland, approximately 87% of social and healthcare workers were female in 2015 (Women and men in Finland 2016, p. 47). For those in the nursing profession, this percentage was 92 in 2014 (Tilastoraportti, 2018). The

mean age of the respondents was 57 (SD 3.7). Most of the respondents had a college level education (78%). Approximately three-quarters of the respondents were married or in a non-marital relationship. Over 90% of the respondents had a permanent job. Half of the respondents worked in shifts. The majority of the respondents worked overtime only occasionally (67%). The average monthly salary was around 2800€ In 2017, the average (mean) wage for Finnish municipal employees in fulltime, regular work was 3049€ For male municipal employees, the mean wage was 3458€and, for females, 2943€(<http://www.stat.fi/til/ksp/>). Approximately one-third of the respondents (34%) had not considered early retirement. Nearly 70% of the respondents were not against the idea of continuing working after reaching the official retirement age.

Please insert Table 1 about here.

Measures

The questionnaire covered broad areas, such as perceptions about wellbeing, health, pension reform, retirement intentions, work ability, resilience, job satisfaction, organizational commitment, perceived HRM practices, managerial and co-worker support, and perceived development opportunities.

In the resilience literature, there is no consensus regarding how adversities should be measured (see, e.g., Britt *et al.*, 2016). In the present study, resilience was measured using Hardy *et al.*'s (2004) scale. A translation-back-translation method was used when translating the resilience scale. Respondents were asked to indicate whether they had encountered a stressful event during the previous five years. A list of stressful events were provided, including 1) one's own

sickness/injury/accident; 2) a partner's or child's sickness/injury/accident; 3) a partner's or child's death; 4) close one's sickness/injury/accident; 5) close one's death; 6) divorce/separation; 7) maltreatment/a dangerous situation/a psychological or physical threat; 8) financial distress; 9) relocation; 10) other event; and 11) nothing stressful happened. Those who had experienced a stressful event were asked to evaluate the stressfulness of the event on a scale from 0 (not very stressful) to 10 (extremely stressful). After that, the questionnaire asked how the individual had perceived the stressful event, how they had recovered from it, and what the consequences of the stressful event were. The resilience scale varied from 0 (low resilience) to 18 (high resilience) (see, Hardy *et al.*, 2004, p. 258). Adversities were measured similarly in Hildon *et al.*'s (2008) study focusing on older individuals (70+).

The HIWPs scale was based on Harmon *et al.*'s (2003) scale. The scale included 10 Likert-scale items concerning, for example, information sharing, performance-based rewards, teamwork, empowerment, and trust between a supervisor and the employees. The respondents were asked to evaluate the extent to which the items were present in their workplace (see, e.g., Harmon *et al.*, 2003). A sample item is "There is trust between employees and the supervisor." The scale anchors were 1) very little, 2) relatively little, 3) neither little or much, 4), relatively much, and 5) very much. The Cronbach's alpha value was 0.875.

In this study, retirement intentions are used as an estimate for an individual's actual retirement behavior, in line with several previous studies (Stynen *et al.*, 2017; Davies and Cartwright, 2011). Older nursing professionals' early retirement intentions were measured with one question: "Have you thought about retiring before the age of retirement?" A similar question was used in Stynen *et al.*'s (2017) study. For logistic regression analyses, the scale was divided into those who had no intentions of early retirement (1) and those who had at least sometimes

considered early retirement (0). The intention to continue working after retirement age was measured with the statement, “I believe that my health will allow me to continue working in my current profession after the age of 63.” The three-point response scale was divided into yes/maybe (1) and no (0). The same question was used in Vanhala’s (2013) study. The use of health-specific retirement questions can be justified by the notion that health is often seen as a significant factor influencing an employee’s ability to continue working into older age (Beehr and Bennett, 2015).

Statistical analysis

Percentages, means, standard deviations, and correlation analysis (Spearman) were used to describe the data (SPSS 22.0). The four-step procedure suggested by Baron and Kenny (1986) was followed when testing the mediation model. According to Baron and Kenny (1986), to test a mediation, the following steps must be followed. First, there must be an association between the predictor variable (perceived HIWPs) and the outcome variable (retirement intentions) (H1a-b). Second, the predictor variable (perceived HIWPs) must be linked to the mediator variable (resilience) (H2). Third, there must be a significant association between the mediator variable (resilience) and the outcome variable (retirement intentions) (H3a-b). Fourth, after controlling for the mediator variable (resilience), the association between the independent variable (perceived HIWPs) and the outcome variable (retirement intentions) should be insignificant (full mediation) or reduced (partial mediation) (H4a-b) (Wood *et al.*, 2008). Logistic regression analyses (Enter method) were used to test Hypotheses 1a-b, 3a-b, and 4a-b because the dependent variables (early retirement intentions and intentions to continue working after the official retirement age) were dichotomous, whereas linear regression analysis (Enter method) was used to test Hypothesis 2 because resilience was not a dichotomous variable. The

variables were standardized before running the regression analyses. In the logistical regression analyses, Nagelkerke R² was used, describing the amount the model can explain (Nagelkerke, 1991). Age (continuous), gender (female = 1, male = 0), marital status (1 = married/non-marital relationship, 0 = unmarried/divorced/widowed), and education (1 = bachelor's degree or higher, 0 = college level or lower) were included in the regression models as control variables, as these are often related to retirement intentions (Beehr and Bennett, 2015). Additionally, there is some evidence that age, gender, and education level are related to individual resilience (Bonanno *et al.*, 2007).

Results

The respondents were asked to report the most stressful event that had occurred in their life during the previous five years. A close one's death (21%) and one's own (17%) or partner's/child's sickness, injury, or accident (12%) were the most commonly reported stressful events (Table 2). Divorce (4%), maltreatment (4%), financial issues (4%), and relocation (2%) were the events most rarely mentioned. 18% of the respondents indicated they had not experienced any stressful events during the previous five years.

Please insert Table 2 about here.

The stressful events were further categorized into four categories, in line with Hardy *et al.*'s (2004) study. These categories included: 1) personal illness (20%, n = 65), 2) the death of a family member or friend (29%, n = 90), 3) the illness of a family member or friend (24%, n = 76), and 4) a nonmedical event (27%, n = 84). All of these events were perceived as rather

stressful (scale 0–10) by the nursing professionals (Table 3). No statistically significant differences between the nature of the event and the perceived stressfulness were found. The highest levels of stressfulness were related to one's own personal illness ($M = 8.17$, $SD = 1.61$), followed by the illness of a family member or friend ($M = 8.07$, $SD = 1.75$).

Please insert Table 3 about here.

By using cross tabulation, a statistically significant relationship between the stressful event and resilience levels was found ($\chi^2 = 35.74$, $df = 6$, $p < 0.001$). Higher resilience was demonstrated when the stressful event was related to the death or illness of a family member or friend (Table 4).

Please insert Table 4 about here.

The relationships between resilience, perceived HIWPs, and different retirement intentions were analyzed by using correlation and regression analyses. The mean values for resilience (Mean = 10.22, $SD = 3.85$) and HIWPs (Mean = 3.32, $SD = 0.62$) were moderate (Table 5). Age correlated negatively with early retirement intentions ($r = -0.118$, $p < 0.05$) and positively with intentions to continue working after retirement age ($r = 0.320$, $p < 0.01$). Resilience was positively associated with perceived HIWPs ($r = 0.121$, $p < 0.05$) and intentions to continue working after retirement age ($r = 0.172$, $p < 0.01$) and negatively with early retirement intentions ($r = -0.196$, $p < 0.01$). Similarly, perceived HIWPs were negatively related to early retirement intentions ($r = -0.207$, $p < 0.01$) and positively with intentions to continue working after retirement age ($r = 0.240$, $p < 0.01$). There was a strong negative correlation between early

retirement intentions and intentions to continue working after retirement age ($r = -0.535$, $p < 0.01$).

Please insert Table 5 about here.

In line with Baron and Kenny (1986), the first logistic regression model tested the relationship between perceived HIWPs and early retirement intentions (H1a). In Model I (Table 6), being married or in a non-marital relationship ($OR = 0.544$) decreased the odds of not retiring before retirement age, whereas HIWPs perceived as good ($OR = 1.533$) increased the odds of not retiring before retirement age. Model II tested the relationship between perceived HIWPs and resilience (H2), and a statistically significant positive association was found ($\beta = 0.154$, $p = 0.05$). Additionally, gender ($\beta = -0.151$, $p = 0.05$) and marital status ($\beta = 0.158$, $p = 0.05$) were statistically significantly related to resilience. Compared to the female respondents, the male respondents had higher levels of resilience. Resilience levels were also higher among those who were married or in a non-marital relationship compared to single respondents. Model III shows that resilience increased the odds of not retiring before retirement age ($OR = 1.490$) (H3a). In Model IV, the mediation of resilience was tested (H4a). The effect of perceived HIWPs was reduced ($OR = 1.364$) once resilience ($OR = 1.438$) was included in the model at the same time, indicating that resilience partially mediates the relationship between perceived HIWPs and early retirement intentions. However, Nagelkerke R^2 was relatively low in the tested models.

Please insert Table 6 about here.

Table 7 indicates the results of testing the relationship between perceived HIWPs and intentions to continue working after retirement age (H1b). In Model I, older age ($OR = 1.417$) and HIWPs

perceived as good (OR = 1.373) increased the odds for continuing to work after old age retirement age. Model II is identical to Model II in Table 6. Model III (H3b) shows that resilience increased the odds for continuing to work after retirement age (OR = 1.560). In Model IV (H4b), the effect of HIWPs became insignificant once resilience (OR = 1.507) was included in the regression, indicating that resilience fully mediates the relationship between perceived HIWPs and intentions to continue working after retirement age. Nagelkerke R² was rather low in the tested models.

Please insert Table 7 about here.

In sum, the results of the regression analyses indicate that the association between perceived HIWPs and early retirement intentions was partly mediated by resilience. Resilience fully mediated the relationship between perceived HIWPs and intentions to continue working after retirement age.

Discussion

This study investigated the links between perceived HIWPs, resilience, and retirement intentions. Furthermore, it tested the possible mediating role of resilience in the relationship between perceived HIWPs and retirement intentions. The results indicated that most of the respondents had confronted an adverse life event during the previous five years and that the event was perceived as highly stressful. Most of the stressful events were related to one's own or a close one's illness. This finding supports Hildon *et al.*'s (2008) notion that individuals are likely to face health-related adversities in older age. The results showed that perceived HIWPs were negatively related to early retirement intentions and positively associated with intentions

to continue working after retirement age, supporting Hypotheses 1a and 1b. The perceived HIWPs were also positively related to resilience, supporting Hypothesis 2. This result supports previous studies, which have demonstrated the importance of HRM practices for enhancing employee resilience (Cooke *et al.*, 2016; Bardoel *et al.*, 2014). In line with Bonanno *et al.*'s (2007) study, this study's results indicate that males had higher levels of resilience compared to females. Furthermore, the study shows that resilience levels were higher for nursing professionals who were married or in a non-marital relationship. In line with the COR theory, close relationships, such as marriage, can be considered a resource that can have a positive influence on an individual's resilience (Bonanno *et al.*, 2007). Hypotheses 3a and 3b were also confirmed; resilience was significantly related to both forms of retirement intentions. High resilience decreased the odds for early retirement intentions and increased the odds for continuing to work after reaching retirement age. Consequently, this study illuminates the significance of resilience regarding retaining older employees in working life (Luthans *et al.*, 2006). The results showed that resilience partially mediated the relationship between perceived HIWPs and early retirement intentions and fully mediated the relationship between perceived HIWPs and intentions to continue working after reaching the official retirement age. This finding provides evidence for the mediating role of resilience in the relationship between perceived HRM practices and employee-level outcomes (Cooke *et al.*, 2016). Current results indicate that HRM practices can be used to some extent to influence older nursing professionals' early retirement intentions. When addressing intentions to continue working beyond the official retirement age, HRM practices can strengthen the resilience of older employees, contributing to their abilities to continue working after official retirement age. Interestingly, marital status was significantly related to early retirement intentions. Unmarried, divorced, or widowed nursing professionals were less likely to retire early compared to those who were married or in a non-marital relationship. Perhaps, single nursing professionals have a stronger financial

necessity for continuing to work (Shacklock and Brunetto, 2011; Templer *et al.*, 2010) or their engagement in family responsibilities differs from their married colleagues (Beehr and Bennett, 2015). In line with Davies and Cartwright's (2011) study, the results of the present study demonstrated that older age increased the odds for continuing to work beyond the official retirement age. In other words, in a sample of nurses aged 50 and over, higher age was found to be associated with intentions to continue working beyond retirement age, compared to younger age.

Theoretical contribution

The theoretical contribution of this study is threefold. First, it examined the associations between perceived HRM practices and employee resilience, providing more evidence about the role of HRM in employees' resilience (Bardoel *et al.*, 2014; Cooke *et al.*, 2016; Britt *et al.*, 2016). Evaluating individual resilience has primarily focused on early life, such as examining when individuals enter into military service or working life (Britt *et al.*, 2016, p. 388). Most of the attention has been focused on resilience training, especially in a military context (Britt *et al.*, 2016). Only limited attention has been given to HRM practices that support employee resilience (Bardoel *et al.*, 2014). Surprisingly little attention has been given to late-career resilience, even though individuals will likely encounter adverse life events when they get older (Ezeamama *et al.*, 2016). This study contributes to this discussion by demonstrating a significant positive association between perceived HIWPs and the level of resilience in older nursing professionals.

Second, this study investigated the association between resilience and retirement intentions, extending the knowledge concerning the outcomes of individual-level resilience (King *et al.*,

2016). Resilience has been considered an important component of individuals' PsyCap, indicating that employees with high resilience are more able to cope with and adapt to the changes in their working environment (Luthans *et al.*, 2006). This study's results provide evidence that older nursing professionals with high levels of resilience are more likely to continue working until and even beyond retirement age than those with lower levels of resilience.

Third, this study investigated the possible mediating role of employee resilience in the relationship between perceived HRM practices and retirement intentions. Only a few HRM studies have investigated the possible mediating role of resilience between HRM practices and employee-level outcomes (Cooke *et al.*, 2016; Shin *et al.*, 2012). In line with the COR and social exchange theories, the current findings indicate that HRM practices provided by the organization can have a positive impact on older employees' resilience, which in turn can influence their late-career intentions.

Managerial implications

Most of the studied older nursing professionals had confronted a stressful event during the previous five years. It is likely that those events at least partly influence their late-career and retirement decisions. Based on these results, it is important for HR professionals and supervisors to be aware of the adversities older employees are likely to face. For example, resilience as a specific topic could be included in late-career discussions among older employees (Brandan *et al.*, 2013/2014). Furthermore, surveys measuring resilience as a part of wellbeing at work would help HR professionals to identify the current levels of resilience among employees and help indicate how these levels could be improved. This information

could be used when HR professionals design and implement practices aiming to strengthen employee resilience. The results of this study indicate that HRM practices, such as HIWPs, can be used to reinforce older employees' resilience, improving their abilities to continue working. Furthermore, HR professionals and supervisors could pay more attention to the social networks in the organization, because strengthening the social capital of employees may be one way to support employee resilience (cf. Luthans *et al.*, 2006). Strong organizational culture together with HIWPs may also buffer employees from the adversities and uncertainties taking place inside and outside organizational boundaries. (cf. Luthans *et al.*, 2006). In the future, an increasing number of older employees will be expected to remain working longer. Therefore, managers should focus on HRM practices that aim to enhance employee resilience during the late-career period.

Limitations and suggestions for future research

This study has some limitations. First, the study focused on older nursing professionals working in one organization, thus limiting the generalizability of the results. Because most of the respondents were female, possibilities to generalize the results to male nursing professionals is limited. Future research regarding the role of resilience in the retirement process should include an equal proportion of men and women. Secondly, resilience has been conceptualized and measured differently across different studies (Linnenluecke, 2017). No universal agreement exists concerning the measurement of adverse life events and adaption to those events (Britt *et al.*, 2016). This study employed the resilience scale developed by Hardy *et al.* (2004) and analyzed resilience as an individual's response to adverse life situations rather than as a personality trait. The primary focus of Hardy *et al.*'s (2004) resilience scale was on adverse events outside the workplace, such as an individual's own sickness or the sickness of a loved

one. In the future, more information is needed about the adverse events experienced in the workplace, such as work overload, problems with one's supervisor, and harassment (Britt *et al.*, 2016, p. 381). Thirdly, due to this study's cross-sectional setting, the causality of the studied variables cannot be verified. By using longitudinal data, it would be possible to investigate the process of resilience, as well as the resilience trajectories (Britt *et al.*, 2016; King *et al.*, 2016). This study focused on perceived HRM practices as antecedents of resilience, but there are also factors inside and outside working life, such as social networks, which are likely to influence resilience (see, e.g., Hildon *et al.*, 2008; Luthans *et al.*, 2006). Additionally, it is postulated that specific HR practices, such as mindfulness training, may be useful for enhancing employee resilience (Thogersen-Ntoumani *et al.*, 2017). Future studies could examine the impact of those types of programs. Finally, the focus of this study was on individual-level resilience. The connections between individual-, group-, and organization-level resilience could be an interesting path for future studies (see, e.g., Linnenluecke, 2017, p. 25).

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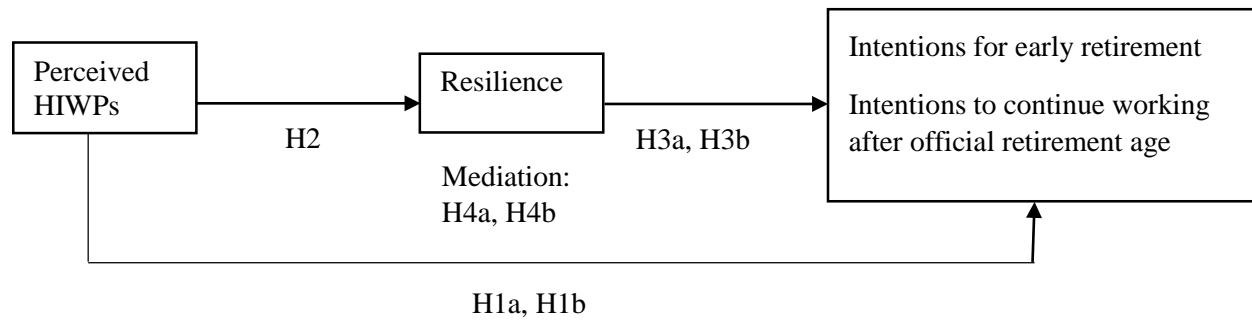


Figure 1 The hypothesized relationships between perceived HIWPs, resilience and retirement intentions

Table 1 Demographic characteristics (% , n)

Gender,% (n)	
Women	90 (353)
Men	10 (39)
Age, mean \pm SD	57.0 \pm 3.7
Education,% (n)	
College level or lower	78 (305)
Bachelors' degree or upper	22 (84)
Form of employment,% (n)	
Permanent (full or part-time)	93 (364)
Temporary (full or part-time)	7 (27)
Working time,% (n)	
Regular day or night work	50 (195)
Shift work	50 (194)
Overwork,% (n)	
Not at all	18 (68)
Occasionally	67 (258)
Regularly	16 (62)
Pay €month, mean \pm SD	2843.8 \pm 1215.4
Marital status, % (n)	

Married or in non-marital relationship	72 (280)
Single (including divorced and widowed)	28 (109)
Early retirement intentions, % (n)	
I have not thought about early retirement	34 (135)
I have at least sometimes thought about early retirement	66 (261)
Intentions to continue working after official retirement age, % (n)	
Yes / maybe	67 (230)
No	33 (112)

Table 2 The most stressful event during the last five years (% , n)

The most stressful event	% (n)
Own sickness, injury or accident	17 (65)
Partner's or child's sickness, injury or accident	12 (48)
Partner's or child's death	2 (8)
Close one's sickness, injury or accident	7 (28)
Close one's death	21 (82)
Divorce or separation	4 (15)
Maltreatment / dangerous situation / psychological or physical treat	4 (17)
Financial distress	4 (17)
Relocation	2 (8)
Other event	7 (27)
Nothing stressful has happened	18 (71)

Table 3 Stressfulness of the event (M, SD)

<i>Stressful event</i>	N	<i>Stressfulness of the event</i>	
		Mean	SD
Personal illness	65	8.17	1.61
Death of a family member or friend	90	7.52	2.27
Illness of a family member or friend	74	8.07	1.75
Nonmedical event	79	7.91	2.14
Total	308	7.89	2.00

Table 4 Stressful events and the level of resilience (% , n)

<i>Level of resilience</i>	<i>Stressful event</i>			
	Personal illness	Death of a family member or friend	Illness of a family member or friend	Nonmedical event
Low (0-6)	21% (12)	11% (9)	10% (6)	34% (24)
Intermediate (7-10)	43% (24)	17% (13)	26% (16)	29% (20)
High (11-18)	36% (20)	72% (57)	64% (40)	37% (26)
Total	100% (56)	100% (79)	100% (62)	100% (70)

Table 5 Means, Standard Deviations and correlations (Spearman) of the study variables

	Mean	SD	1	2	3	4	5
1 Age	57.01	3.69	1 (n = 391)				
2 Resilience	10.22	3.85	.022 (n = 267)				
3 HIWPs	3.32	0.62	.145** (n = 384)	.121* (n = 267)			
4 Early retirement intentions	1.11	1.09	-.118* (n = 384)	-.196** (n = 267)	-.207** (n = 381)		
5 Intentions to continue working after retirement age	1.04	0.83	.320** (n = 340)	.172** (n = 233)	.241** (n = 339)	-.535** (n = 339)	1

*p < 0.05, **p < 0.01

Table 6 (Logistic) regression analyses for testing the relationships between perceived HIWPs, resilience and early retirement intentions

Variables	Model I (Early retirement intentions)			Model II (Resilience)			Model III (Early retirement intentions)			Model IV (Early retirement intentions)		
	B	(SE)	Exp β (OR)	B	(SE)	β	B	(SE)	Exp β (OR)	B	(SE)	Exp β (OR)
Age	0.085	(0.119)	1.088	0.126	(0.248)	0.032	0.106	(0.145)	1.112	0.059	(0.149)	1.060
Gender	-0.363	(0.370)	0.696	-1.989*	(0.813)	-0.151*	0.130	(0.488)	1.139	0.088	(0.491)	1.092
Marital status	-0.608*	(0.251)	0.544*	1.334*	(0.520)	0.158*	-0.762*	(0.303)	0.467*	-0.846**	(0.310)	0.429**
Education	0.219	(0.274)	1.245	0.215	(0.558)	0.024	0.467	(0.320)	1.595	0.476	(0.324)	1.609
Resilience	-	-	-				0.399**	(0.149)	1.490**	0.363*	(0.152)	1.438*
Perceived HIWPs	0.427**	(0.128)	1.533**	0.608*	(0.245)	0.154*	-	-	-	0.311*	(0.155)	1.364*
Adjusted R ²					0.063							
Nagelkerke R ²	0.077						0.078			0.101		
N	361				252		254			252		

Notes: B = Unstandardized beta; SE = Standard error; β = Standardized beta; OR = Odds ratio; * $p < .05$, ** $p < .01$; Model II uses linear regression analysis to test effect of HIWPs on resilience

Table 7 (Logistic) regression analyses for testing the relationships between perceived HIWPs, resilience and intentions to continue working after retirement age

Variables	Model I (Intentions to continue working after retirement age)			Model II (Resilience)			Model III (Intentions to continue working after retirement age)			Model IV (Intentions to continue working after retirement age)		
	B	(SE)	Exp β (OR)	B	(SE)	β	B	(SE)	Exp β (OR)	B	(SE)	Exp β (OR)
Age	0.348**	(0.125)	1.417**	0.126	(0.248)	0.032	0.475**	(0.152)	1.607**	0.431**	(0.154)	1.538**
Gender	0.208	(0.387)	1.231	-1.989*	(0.813)	-0.151*	0.463	(0.484)	1.590	0.425	(0.489)	1.530
Marital status	-0.026	(0.273)	0.974	1.334*	(0.520)	0.158*	-0.186	(0.332)	0.831	-0.268	(0.336)	0.765
Education	-0.062	(0.288)	0.940	0.215	(0.558)	0.024	0.151	(0.346)	1.163	0.143	(0.350)	1.154
Resilience	-	-	-				0.445**	(0.157)	1.560**	0.410**	(0.159)	1.507**
Perceived HIWPs	0.317*	(0.125)	1.373*	0.608*	(0.245)	0.154*	-	-	-	0.296	(0.159)	1.344
Adjusted R ²					0.063							
Nagelkerke R ²	0.074						0.120			0.138		
N	317				252		220			218		

Notes: B = Unstandardized beta; SE = Standard error; β = Standardized beta; OR = Odds ratio; * $p < .05$, ** $p < .01$; Model II uses linear regression analysis to test the effect of HIWPs on resilience