

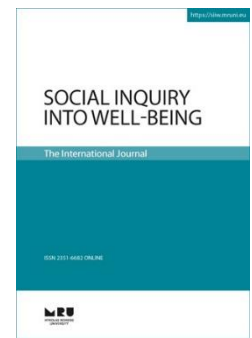


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# Job satisfaction mediates the association between perceived leadership styles and early retirement intentions

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### Abstract

The ageing of the population is particularly challenging for the healthcare sector, which is at the same time facing a nursing shortage. Therefore, improving work conditions and well-being at work in order to prolong nurses' careers and retention in their profession until retirement age has become one of the key issues of healthcare leaders and policymakers. This study tested a structural model linking nurses' perceived leadership styles and early retirement intentions. We tested the model in a sample of 343 nurses at one Finnish university hospital. It was hypothesized that the relationship between perceived leadership styles and early retirement intentions would be mediated by job satisfaction. We found that age, work ability, job control and reward satisfaction were directly associated with early retirement intentions. Furthermore, perceived employee-oriented and task-oriented leadership, organizational justice and work ability were related to job satisfaction, which in turn was related to early retirement intentions. In conclusion, the results indicated that job satisfaction acted as a mediator in the relationship between leadership styles, organizational justice, work ability and early retirement intentions. The findings have important implications for research and healthcare practitioners in promoting nurses' well-being at work and retaining them for a longer period in the nursing profession.

*Keywords:* ageing, nurses, leadership, job satisfaction, well-being at work, early retirement intentions

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### Introduction

The nursing shortage, which is estimated to reach 590,000 needed but not available nurses in the EU by 2020,

is a global phenomenon (Buchan & Aiken, 2008; Sermeus & Bruyneel, 2010). Failure to deal with the nursing shortage will lead to a failure to maintain or improve healthcare (Buchan & Aiken, 2008). Concerns about the shortage of

nurses are likely to grow in the future as the demand for nurses continues to increase, due to the ageing population and the ageing of the “baby-boomer” generation, which is also expected to cause a wave of retirements among nurses (OECD, 2013). Finland has one of the most rapidly ageing societies in the world due to its rather large baby-boomer generation, increased life expectancy and the low fertility rate (Ilmarinen, 2006). The number of citizens aged 65 or over is estimated to rise from 18% (2012) to 26% by 2030 and to 28% by 2060. The current life expectancy in Finland is 77.8 years for men and 83.8 years for women. (Official Statistics of Finland, 2014.) In Finland, the age of healthcare sector employees is higher than average, and therefore it is expected that 22.7 percent of nurses will retire by 2020 and 35.7 percent by 2025 (Ministry of Economic Affairs and Employment, 2012). Thus, the shortage is additionally worsened by the occupational (Flinkman, Laine, Leino-Kilpi, Hasselhorn, & Salanterä, 2008; Flinkman, Leino-Kilpi, & Salanterä, 2010) and organizational turnover among nurses (Aiken et al., 2012). Recent studies have demonstrated that a substantial proportion of nurses in European countries have considered leaving their job. Intention to leave job was particularly high in Greece (49 %), England, Ireland and Poland (44 %), Germany (36 %), Sweden (34 %) and Belgium (30 %). In the Netherlands intention to leave job was lower than most countries (19 %) and in the US intention to leave job was lower (14 %) than in all European countries. (Aiken et al., 2012.) Also in Finland 49 percent of all nurses (Aiken et al., 2012) and 24 percent of young nurses considered leaving their profession (Flinkman, 2014). Therefore, improving work conditions and well-being at work, in order to prolong nurses’ careers and retention in their profession until retirement age, has become one of the key issues of healthcare leaders and policymakers.

In this study, we focus on individual-level and organizational-level factors that may play a role in retirement intentions and subsequent retirement decision-making (Wang & Shultz, 2010; Wang & Shi, 2014; von Bonsdorff, 2016). Previous literature has shown that several individual factors, such as age, gender (Feldman & Beehr, 2011), and health (van den Berg, Elders, & Burdorf, 2010; Feldman & Beehr, 2011; van Rijn, Robroek, Brouwer, & Burdorf, 2016), as well as organizational factors such as job strain and job control (Wang & Shultz, 2010), are associated with early retirement intentions. Many studies have also indicated an association between leadership behaviour and job satisfaction and organizational commitment (Pool, 1997; Skogstad, 1997; Lok & Crawford, 2004; Yu & Miller, 2005), job satisfaction and well-being (Cummings et al., 2010; Cummings et al., 2008; Kuoppala, Lamminpää, Liira, & Vainio, 2008; Nielsen, Randall, Yarker, & Brenner, 2008) and turnover (Donoghue & Castle, 2009). Despite growing theoretical and empirical knowledge on work-related factors that play a role in the retirement process, little is known about the direct or indirect effects of perceived leadership styles on early retirement intentions. This knowledge is important, as employees’ perceptions of leadership in their organization have been found to affect their work motivation and well-being at work (McNeese-Smith, 1997; Chiok Foong Loke, 2001), as well as their willingness to continue to work (von Bonsdorff, Koponen, & Aaltio, 2009; van den Berg et al., 2010).

The aim of this study is to examine the *direct* and *indirect* association of perceived leadership styles on nurses’ early retirement intentions. Specifically, we were interested in the role of job satisfaction, a work factor related to well-being, in early retirement intentions. We tested a model (Figure 1) where job satisfaction acted as a mediator in the relationship between individual and job-related factors and early retirement intentions.

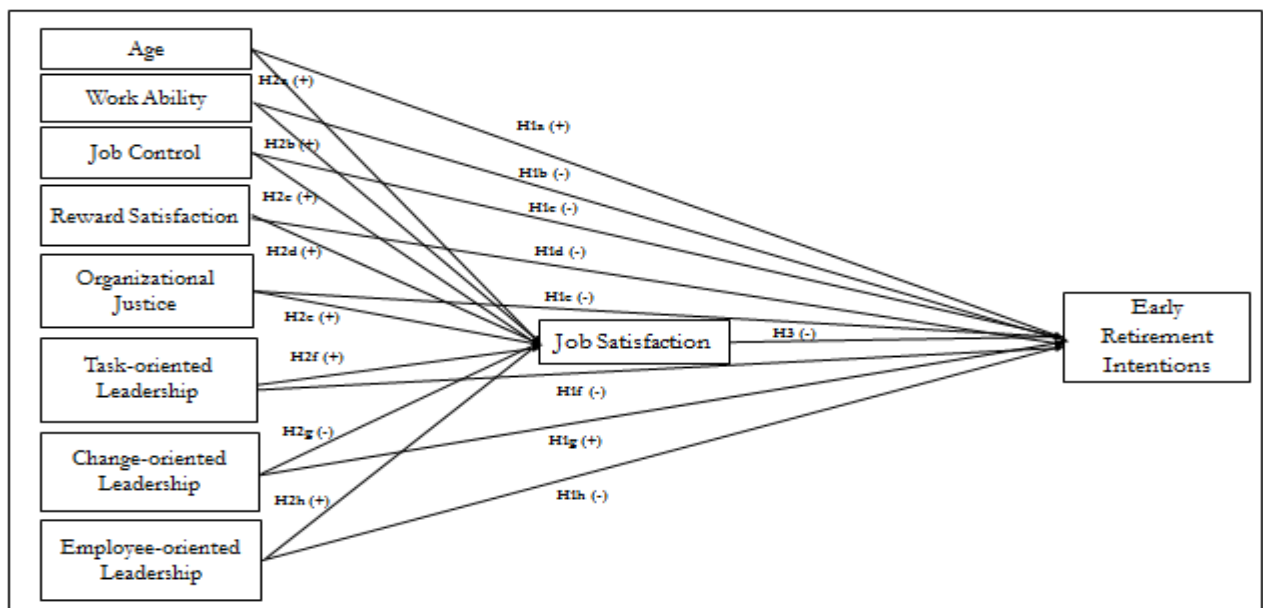


Figure 1. Hypothesized model

Theoretical Framework and Hypotheses

## Retirement Intentions in a Theoretical Context

Early retirement has typically been defined as leaving a position or career path of long duration before the age of 62 years or before becoming eligible for retirement (Feldman, 1994; Damman, Henkens, & Kalmijn, 2012). Transitioning into retirement generally means the end of work after a career of full-time jobs, and it involves some psychological withdrawal from work as well (Feldman, 1994).

The temporal model of retirement, which provides a heuristic description of the retirement process, conceptualizes retirement as consisting of three consecutive phases: specifically, planning, decision-making and transition, and adjustment (Wang & Shi, 2014). According to the model, the decision to retire and the actual transition to retirement are preceded by retirement planning, conceptualized in the current study as retirement intentions (Wang & Shi, 2014).

According to the multi-level model of retirement (Szinovacz, 2013; Wang & Shi, 2014), individual-level factors (i.e. micro-level factors), as well as meso- and macro-level factors, may be associated with retirement intentions, decision-making and adjustment to retirement. Meso- and macro-level factors refer to the broader context of the influence of society and organizations on individuals' behaviours and actions throughout the retirement process. This model can be applied to identifying antecedents of early retirement decisions, including early retirement intentions. The intention to retire early is a strong predictor of actual retirement (Beehr, 1986). Therefore, it is important to be able to identify the factors affecting those intentions, in order to prolong nurses' working lives.

## Leadership

Management in healthcare means ensuring the best possible conditions for care work and its development. The patient is the first priority and all the activities are aimed at the goal of high level care work. To achieve this goal, well-being among the nursing staff is needed. However, ongoing savings and increasingly limited resources in healthcare compromise the well-being of nurses. Management practices used in healthcare are also related to the well-being of nurses. The management of core processes in healthcare has many special features (e.g. anxiety and stress due to the emotional nature of the work), which makes it different from the management of industrial work (Kinnunen, 1992, 41). Issues related to everyday tasks pose very specific demands on managers in healthcare. Hersey, Blanchard and Johnson (1996) emphasize that there is no one correct leadership style which is suitable for every situation. Managers must instead be able to adapt their leadership styles according to the needs of their subordinates and the situation. Effective managers take into account both behavioural aspects and factors of the operating environment. (Hersey, Blanchard, & Johnson, 1996, 144.)

Leadership has been studied from many different perspectives. The study is focused on the characteristics of a leader, leadership behaviour, management of the situation, or all of the above theoretical perspectives combining viewpoint (Juuti, 1989, 54). However, it is important to note

that leadership and management are two different systems of action (Kotter, 1990, 103), which are distinct yet complementary. Management involves a set of well-known processes, including planning, budgeting, structuring jobs, staffing jobs, measuring performance and problem-solving, which helps organizations to carry out their basic purpose. In turn, leadership is associated with vision and bringing an organization into the future; it includes the empowerment of subordinates and, most of all, producing useful change. (Kotter, 2013.)

Leadership styles have traditionally been divided into two behavioural dimensions: task (production)-oriented leadership, primarily concentrated on ensuring that given tasks are accomplished, resources are used efficiently, and order and reliability are maintained; and employee (relations)-oriented leadership, which focuses on ensuring subordinates' job satisfaction and improving the relationship between subordinates by increasing co-operation and work in teams. (Yukl, 2002, 65.) A third dimension of change orientation was added to the two-dimensional leadership model by Ekvall and Arvonen (1991). Change-oriented leadership behaviour describes a supervisor who creates the vision, increases flexibility and innovation, and gains commitment to the changes (Yukl, 2002, 65.)

Given the central role of the supervisor in organizing work, as well as building the work climate, it is not surprising that leadership styles may affect the work-related psychological factors of employees. Many previous studies have shown a strong association between leadership, job satisfaction (Pool, 1997), intentions to stay (Cowden & Cummings, 2015) and intentions to leave nursing (Larrabee et al. 2003; Lok & Crawford, 2004; Coomber & Barribal, 2007).

## Job Satisfaction

Job satisfaction describes the attitudes which the employee has towards his/her work. According to Lu, While and Barribal (2005), job satisfaction can be considered as a global feeling about the job or as a related constellation of attitudes about various aspects or facets of the job. Therefore, there are two ways to measure job satisfaction: general job satisfaction, measuring overall satisfaction with the job, and partial job satisfaction, measuring satisfaction with different aspects of the job (European Foundation for the Improvement of Living and Working Conditions, 2006). Well-being at work has most frequently been studied in terms of overall job satisfaction (Warr, 1992). Hackman and Oldham (1976) identified five job characteristics that determine job satisfaction: skill variety, task identity, task significance, and autonomy and job feedback. Lu et al. (2005) found that the sources of nurses' job satisfaction include physical working conditions, relationships with fellow workers and managers, pay, promotion, job security, responsibility, recognition from managers, and hours of work. Job satisfaction has been identified as the most important predictor of nurses' intentions to remain in (Larrabee et al., 2003) and to leave the profession (Lum, Kervin, Carr, Reid, & Sirola, 1998; Lynn & Redman, 2005).

However, what makes a job satisfying or dissatisfying also depends on the expectations that individuals have

regarding their job quality and results (Lu et al., 2005). Especially in nursing work, where the current workforce shortage increases demands on nurses, conflicts may arise between expectations and the execution of care work. Aiken et al. (2012) found that job dissatisfaction among nurses was highest in Greece (56%), followed by Ireland (42%), England (39%), Spain (38%), Germany (37%) and Finland (27%). Indicative of the critical shortage of nurses is that almost one half (49%) of the nurses in Finland and Greece planned on leaving their job within 12 months (Aiken et al., 2012).

### **Direct Effects of Individual and Organizational Factors Associated with Early Retirement Intentions**

During the last decades, several individual and organizational factors have been established as antecedents of retirement-related decision-making. Higher age has been associated with early retirement intentions and job disengagement (Beehr, 1986; Taylor & Shore, 1995; Kim & Feldman, 1998; Kim & DeVaney, 2005; Shultz & Wang, 2007). This association may be due to the increasing nearness of retirement and its impact on planning for the forthcoming transition, as well as physical and mental capacities, which tend to diminish as employees age (Wang & Shi, 2014). Work ability, a concept largely based on health, has been conceptually defined as the measure of how able an employee is to do his or her job with respect to the demands of the job and his or her health and mental resources (Ilmarinen, 2009). The work ability of aging employees, especially in the 52–58-year-old age group, tends to decline dramatically (Ilmarinen & Tuomi, 2004). Empirical studies have linked work ability to spells of employee sickness, absence, and early retirement (Ahlstrom, Grimby-Ekman, Hagberg, & Dellve, 2010; Alavinia, de Boer, van Duivenbooden, Frings-Dresen, & Burdorf, 2009).

Several psychosocial factors at work have been studied in relation to early retirement. Both high job demand and low job control have been found to independently predict early retirement (Elovainio et al., 2005; Sutinen, Kivimäki, Elovainio, & Forma, 2005; Heponiemi et al., 2008). Siegrist, Wahrendorf, von dem Knesebeck, Jürgens and Börsch-Supan (2007) also found that poor quality of work (a proxy for demand-control and effort-reward-imbalance) and reduced well-being were both independently associated with early retirement intentions. Adequate salary and financial rewards are still widely seen as effective means for keeping employees working. A current study found that reward satisfaction was associated with early retirement intentions among nurses (Salminen, von Bonsdorff, Koponen, & Miettinen, in press). This finding is consistent with several previous studies, where dissatisfaction with pay was associated with older employees' early retirement intentions (Currall, Towler, Judge, & Kohn, 2005; Miceli, Jung, Near, & Greenberg, 1991; von Bonsdorff, 2009; Zappalà, Depolo, Fraccaroli, Guglielmi, & Sarchielli, 2008).

Employee experiences of organizational injustice independently increased retirement intentions (Heponiemi et al., 2008). Procedural justice and interactional justice both have a strong association between turnover and job satisfaction (Alexander & Ruderman, 1987; Laschinger,

2004). Based on previous retirement literature, we formed the following hypotheses:

*Hypothesis 1a:* Age is positively related to early retirement intentions.

*Hypothesis 1b:* Better work ability is negatively related to early retirement intentions.

*Hypothesis 1c:* Job control is negatively related to early retirement intentions.

*Hypothesis 1d:* Reward satisfaction is negatively related to early retirement intentions.

*Hypothesis 1e:* Organizational justice is negatively related to early retirement intentions.

Studies have shown that leadership plays a central role in efforts to retain senior personnel in the workforce (Heilmann, 2010). Perceptions by the staff that a nurse manager is a good leader and manager are related to retention (Duffield, Roche, Blay, & Stasa, 2010). The relational leadership (employee-oriented) style has been shown to have an influence on nurses' intentions to remain in nursing (Cowden, Cummings, & Profetto-Mcgrath, 2011). Sutinen et al. (2005) reported negative correlations between supervisory fairness and retirement intentions. In turn, change-oriented leadership has been found to increase intentions to retire early (von Bonsdorff et al., 2009).

*Hypothesis 1f:* perceived task-oriented leadership style is negatively related to early retirement intentions.

*Hypothesis 1g:* perceived change-oriented leadership style is positively related to early retirement intentions.

*Hypothesis 1h:* perceived employee-oriented leadership style is negatively related to early retirement intentions.

### **Direct Effects of Individual and Job-Related Factors on Job Satisfaction**

Previous studies have shown that age is positively related to job satisfaction. As people become older they tend to be more satisfied with their jobs than younger employees. This is probably due to their lower levels of aspiration in some respects, experiencing a wider range of different job situations, making more comparisons with other people, and having fewer available alternative jobs. Such reduced aspirations and expectations generate more positive work attitudes. (Warr, 1992.) Autonomy, job control and pay (Lu et al., 2005) are also positively related to job satisfaction and attitude towards work is related to good work ability (Gould & Polvinen, 2008). Good work ability has been found to be associated with job satisfaction (Tuomi, Huuhtanen, Nykyri, & Ilmarinen, 2001). Organizational justice affects essential elements related to the organization, such as employees' general job satisfaction, reward satisfaction, and other positive behaviour in the organization (Folger & Konovsky, 1989; Miceli et al., 1991; Moorman, 1991; Niehoff & Moorman, 1993; de Cremer, 2005).

*Hypothesis 2a:* Age is positively related to job satisfaction.

*Hypothesis 2b:* Better work ability is positively related to job satisfaction

*Hypothesis 2c:* Job control is positively related to job satisfaction

*Hypothesis 2d:* Reward satisfaction is positively related to job satisfaction.

*Hypothesis 2e:* Organizational justice is positively related to job satisfaction.

Cummings et al. (2010) found that leadership styles that focus on people and relationships were associated with higher nurse job satisfaction, while leadership styles that focus on tasks were associated with lower nurse job satisfaction. Sellgren, Ekvall and Tomson (2008) also revealed similar relations between leadership behaviour and job satisfaction, and the correlation between job satisfaction and employee-oriented leadership was slightly stronger than for task-orientated and change-orientated leadership styles. Other studies, however, have presented different findings on change-oriented leadership, indicating a positive relationship with mental fatigue (Arvonen, 1995) and role-conflict (Podsakoff, Mackenzie, & Bommer, 1996).

*Hypothesis 2f:* perceived task-oriented leadership style is positively related to job satisfaction.

*Hypothesis 2g:* perceived change-oriented leadership style is negatively related to job satisfaction.

*Hypothesis 2h:* perceived employee-oriented leadership style is positively related to job satisfaction.

### **The Association between Job Satisfaction and Early Retirement Intentions**

Previous studies have shown low job satisfaction to be an important factor for early retirement (van den Berg et al., 2010). It may be that older employees, seeing retirement ahead, tend to value their jobs more than their younger colleagues (Warr, 1992). Furthermore, Wang, Zhan, Liu and Schultz (2008) found that retirees who had higher job satisfaction at preretirement jobs were more likely to engage in career bridge employment than in bridge employment in a different field or full retirement. Similarly, it is plausible that job satisfaction is both directly associated with early retirement intentions, in addition to mediating the effects of personal and job-related factors and early retirement intentions.

*Hypothesis 3a:* Job satisfaction is negatively related to early retirement intentions and mediates the associations between antecedents and early retirement intentions.

## **Method**

### **Participants and Procedures**

Data for this study was collected at a Finnish university hospital. The study population consisted of full-time and part-time, permanently and temporarily employed registered nurses working in a non-managerial position (N = 747). Questionnaires addressed to these nurses were sent out in March and April 2005 as part of an Age Management project at the University of Jyväskylä School of Business and Economics. Participants were asked questions regarding their well-being at work and work-related attitudes, including job satisfaction, organizational justice, self-health, job control, reward satisfaction, perceived leadership behaviour and early retirement intentions.

The response rate of the study was 46.1% (n = 343). The respondents' age ranged between 23 - 59 years, the average age being 41.2 years. The study design allowed the

researchers to analyse the demographic data (age, gender, form of employment) of the non-respondents. No statistically significant differences were detected between respondents and non-respondents in terms of demographic data, implying that no systematic bias occurred among the studied respondents.

### **Measures**

Early retirement intentions were measured with one question: 'How often have you thought about seeking retirement before your full retirement age?' A five-point scale ranged from 1 to 5, with higher scores indicating a higher intention of entering early retirement (1 = 'never', 2 = 'a few times a year', 3 = 'a few times a month', 4 = 'a few times a week' and 5 = 'every day'). Similar classifications have been used in previous studies on early retirement intentions (Elovainio et al., 2005; Lehto & Sutela, 2004; Harkonmäki et al., 2009; von Bonsdorff et al., 2009).

Nurses' evaluations of the behaviour associated with different leadership styles were measured using a fifteen items scale partly based on the CPE Leadership model designed by Ekvall and Arvonen (1991), which embraces three types of leadership centring on task/production, relations/employees and change. The respondents were instructed to evaluate their immediate supervisor i.e. the head nurse of each ward. Items were rated on a five-point Likert scale, from 1 ('strongly disagree') to 5 ('strongly agree'). Examples of items from each leadership style in the aforementioned order were: My manager... 'sets clear goals', 'creates an atmosphere free of conflict, and 'gives thoughts and plans about the future'.

Job satisfaction was measured with one question 'How satisfied are you with your work?' (Lehto & Järnefelt, 2000). The five-point response scale varied from 'very dissatisfied' (1) to 'very satisfied' (5). Among the national surveys, single-item questions regarding respondents' general job satisfaction were the most common measurement (European Foundation for the Improvement of Living and Working Conditions, 2006).

Work ability was measured with three items from the Work Ability Index (WAI) (Tuomi, Vanhala, Nykyri, & Janhonen, 2002). Respondents were asked about their physical and mental health capacities in relation to their current work and their capacity to continue working in the same profession for a further period of two years. The five-point response scale varied from 'very poor' (1) to 'very good' (5).

Reward satisfaction was measured with a six-item scale modified from the Pay Satisfaction Questionnaire developed by Heneman and Schwab (1985). The scale consisted of the following statements: 'I am satisfied with... (1) the pay I receive, (2) the wage trend, (3) the non-financial rewards I receive, (4) the way pay raises are determined and (5) the consistency of the reward practices' (Heneman, Greenberg, & Fox, 2002). The five-point response scale varied between (1) 'extremely dissatisfied' to (5) 'extremely satisfied'.

Nurses' opportunities for job control were measured using a scale partly based on Karasek's (1979) Job Demands-Control model (Elovainio et al., 2005; Lehto & Järnefelt, 2000). Controllability was measured by eight

items. Nurses were asked about their opportunities to determine (1) their working methods, (2) work pace, (3) how work was shared among the staff, (4) who they worked with, (5) procedures at work, (6) the content of their work, (7) the objectives of their work and (8) working hours. The response scale was (1) 'not at all', (2) 'to a limited extent', (3) 'quite a lot' and (4) 'considerably'.

Nurses' perceptions regarding organizational justice were measured with a scale based on Moorman (1991) and Niehoff and Moorman (1993). The scale consisted of four questions related to procedural justice: 1) employees are heard before job decisions are made, 2) employee concerns are heard before job decisions are made, 3) all job decisions are applied consistently across all affected employees and 4) employees are allowed to appeal job decisions that are made; and four questions related to interactional justice: 1) 'When decisions are made about my job, I am treated fairly', 2) 'When decisions are made about my job, I am treated with consideration', 3) 'Decisions about my work are adequately justified' and 4) 'I get the appropriate information about decisions concerning me'. Items were rated on a five-point Likert scale from 1 to 5 (ranging from 'do not agree at all' to 'agree totally'). A sum variable was formed of the two justice components concerning organizational justice.

### Analytical Strategy

The research questions were examined by using structural equation modelling (Muthén, 2000). All the statistical analyses were performed using the Mplus statistical package (Muthén & Muthén, 1998–2010). The parameters of the model were estimated using the MLR procedure (Muthén & Muthén, 1998–2010). The goodness-of-fit of the estimated models was evaluated by five indicators:  $\chi^2$ -test, Comparative Fit Index (CFI), Tucker-Lewin Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Error of Approximation (SRMR). A non-significant  $\chi^2$  value ( $p > .05$ ), CFI and TLI values above 0.95 (1.00, 1.01), a RMSEA value below .06 (.00) and a SRMR value below .08 (.01) indicate a good fit with the data (Muthén & Muthén, 1998–2010).

The analysis was continued by testing the hypothesized model of the antecedents and early retirement intentions of the whole sample ( $N=343$ ) (Figure 1). First, we tested the hypothesized model by examining the standardized path coefficients from job satisfaction, perceived task-oriented,

change-oriented and employee-oriented leadership, organizational justice, work ability, age, job control, and reward satisfaction to early retirement intentions. The hypothesized direct relations between the antecedents and early retirement intentions were investigated by examining a coefficient from the parameters and early retirement intentions. Second, we tested the associations between the antecedents and job satisfaction and, furthermore, the association between job satisfaction and early retirement intentions. We investigated the whole structural model by adding job satisfaction as a mediator between early retirement intentions and perceived task-, change- and employee-oriented leadership, organizational justice, work ability, age, job control, and reward satisfaction.

### Results

The correlations between the study measurements, mean values, standard deviations and reliability estimates are presented in Table 1. Of the respondents, almost 31 percent of those over 54 years old and nearly 22 percent of the 44–54-year-old respondents reported that they experienced frequent early retirement intentions. All of the observed correlations were in the expected direction of our hypotheses. While age correlated negatively with early retirement intentions, other variables, excluding change-oriented leadership style, were positively correlated with early retirement intentions.

Figure 2 displays the final model with path coefficients. The overall fit of the model was sufficiently good;  $\chi^2(6)=5.60$ ,  $p>.05$ , CFI=1.00, TLI=1.01, RMSEA=.00, SRMR=.01. Although RMSEA and SRMA were low, the other modification indices showed a good fit with the data. The results of the fit indexes showed that the tested model fit the data well.

Hypothesis 1a, which states that older age is positively associated with early retirement intentions, was supported. We also found that (better) work ability, (higher) job control, and reward satisfaction were negatively associated with early retirement intentions. Therefore, hypotheses 1b to 1d were supported. However, organizational justice was not associated with early retirement intentions in a statistically significant manner. Therefore, hypothesis 1e was not supported. Furthermore, we did not find a statistically significant association between the three leadership styles and early retirement intentions. Hence, hypotheses 1f, 1g, and 1h were not supported.

Table 1

*Characteristics of the study variables (means and standard deviations unless stated otherwise). Correlations (Spearman) between continuous study variables and outcomes ( $n=343$ )*

	<i>M</i>	<i>SD</i>	<i>Alpha</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Early retirement intentions (frequent) %	19	-	-	1									
2. Age	41.2	9.2	-	.198**	1								

3. Work ability	4.46	.61	.80	-.147**	-.106*	1							
4. Job control	2.09	.49	.81	-.107*	-.058	-.006	1						
5. Reward satisfaction	1.93	.70	.81	-.229**	-.103	-.064	.184**	1					
6. Organizational justice	2.84	.92	.92	-.173**	.045	.108*	.257**	.405**	1				
7. Job satisfaction	3.54	.99	-	-.233**	.043	.098	.197**	.222**	.348**	1			
8. Task-oriented leadership	2.84	.87	.80	-.105	.087	.058	.200**	.176**	.331**	.321**	1		
9. Employee-oriented leadership	3.11	.94	.93	-.130*	.047	.053	.192**	.367**	.387**	.356**	.512**	1	
10. Change oriented leadership	3.16	.94	.92	-.172**	.029	-.022	.246**	.342**	.404**	.285**	.510**	.748**	1

\*  $p < .05$ , \*\*  $p < .01$

We additionally tested the relationship between the antecedents and job satisfaction. Hypotheses 2a, 2c, and 2d were not supported, as age, job control, and reward satisfaction were not statistically significantly associated with job satisfaction. In contrast, we found support for hypotheses 2b and 2e, as better work ability and higher organizational justice were positively associated with job satisfaction. We also found support for hypotheses 2f and 2h, as perceived task- and employee-oriented leadership styles were positively associated with job satisfaction.

However, perceived change-oriented leadership style was not statistically significantly associated with job satisfaction. Therefore, hypothesis 2g was not supported.

Finally, we found a positive association between job satisfaction and early retirement intentions, and statistically significant indirect effects from antecedents through job satisfaction to early retirement intentions were from perceived task-oriented leadership, from perceived employee-oriented leadership, from organizational justice and from work ability. However, there were no statistically significant indirect effects from antecedents through job satisfaction to early retirement intentions from age, job control, reward satisfaction and perceived change-oriented leadership. Therefore, hypothesis 3 was partly supported (Figure 2).

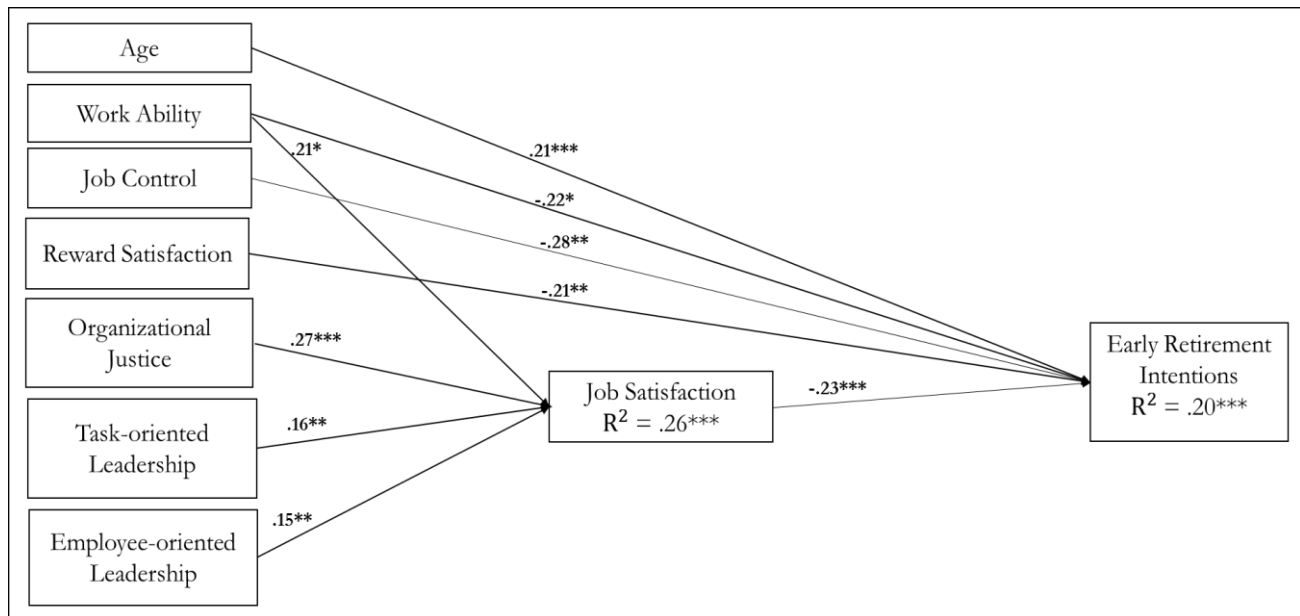


Figure 2. The model of the mediating role of job satisfaction between the antecedents and early retirement intentions. Indirect effects through job satisfaction to early retirement intentions were significant: task-oriented leadership  $-.04^{**}$ , employee-oriented leadership  $-.04^{*}$ , work ability  $-.05^{*}$ , and organizational justice  $-.06^{**}$ .

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

### Discussion

The findings of this study contribute to the current knowledge of the antecedents of early retirement intentions, particularly the roles of job satisfaction and leadership. As a result we found direct associations between age, work ability, job control, reward satisfaction and early retirement

intentions. This is in line with previous studies which have established the importance of both age and health-related factors, as well as psychosocial work-related factors, as determinants of early retirement intentions and decision-making (Wang & Shultz, 2010; Wang & Shi, 2014; von Bonsdorff, 2016). In this study, we found direct associations between work ability, organizational justice, perceived task-

and employee-oriented leadership and job satisfaction. This is also in line with previous studies which have identified these individual-level and organizational-level factors as determinants of job satisfaction (Gould & Polvinen, 2008; Leiter & Maslach, 2009; Sellgren et al., 2008).

Age has been described as a significant predictor of job satisfaction (Warr, 1992; Dobrow Riza, Ganzach, & Liu, 2015); according to this study, work ability proved to be a more important factor for nurses' job satisfaction than age. In the current study, work ability was both directly and indirectly associated with nurses' early retirement intentions. This finding is consistent with several previous studies that reported on the negative effects of either perceived health (Wang & Shultz, 2010; Wang & Shi, 2014; Fisher, Chaffee, & Sonnega, 2016) or work ability (Alavinia et al., 2009; Ahlstrom et al., 2010) and early retirement intentions or decisions. It also reflects the central role of work ability, which is largely predicated on health and individual's resources, in the retirement process (Ilmarinen, 2009). The work ability of aging employees tends to decline dramatically (Ilmarinen & Tuomi, 2004). This development may facilitate retirement decision-making (von Bonsdorff, 2016). In this study, we found that job satisfaction also mediated the relationship between early retirement intentions and organizational justice and perceived task-oriented and employee-oriented leadership styles.

The most interesting finding of this study is that perceived task- and employee-oriented leadership styles affect early retirement intentions through job satisfaction. While previous studies have focused on human resource management (HRM) practices, such as rewarding and development opportunities (Salminen et al., in press), the role of leadership styles has largely been neglected. The previous studies have shown a strong association between leadership and job satisfaction (Pool, 1997; Cummings et al., 2008) and intentions to leave nursing (Larrabee et al., 2003; Lok & Crawford, 2004; Coomber & Barriball, 2007), but little is known about the direct or indirect effects of leadership on early retirement intentions. There is some indication that empowerment can be predictive of early retirement among nurses and nurses' intention to stay. Empowerment has been found to be associated with relational leadership style (Blakeley & Ribeiro, 2008; Cowden & Cummings, 2015.) The employee-oriented leadership style has been found to contribute to improving outcomes for the nursing workforce (Cummings et al., 2010; Sellgren et al., 2008) and the task-oriented leadership style has been found to be associated with job security, financial rewards and time spent with patients (Cummings et al., 2010). Both leadership styles contain important elements of good leadership. Employee-oriented leaders also need to integrate the task-oriented leadership style (Cummings et al., 2010), especially in healthcare environments where co-operation and team work are essential for achieving good results in care and where clarity of the job role and tasks is critical (i.e., one mistake can mean loss of human life).

Nowadays, change is an ordinary, everyday aspect of organization. Change-oriented leadership has been identified as important in a process of continuous change (Kotter 1995). In this study, however, the change-oriented leadership style was not associated with job satisfaction.

Previous studies have presented similar findings, indicating an association with mental fatigue and role-conflict (Arvonen, 1995; Podsakoff et al., 1996). These findings shed light on the complex set of leadership factors associated with early retirement intentions. Therefore, given the present state of the nursing shortage and the key role of leadership styles in improving nurses' job satisfaction and preventing them from retiring early, nurse managers need to evaluate whether they have sufficient knowledge about the different variables related to leadership styles.

**Practical Implications.** Nurse retention is both an expectation and major responsibility of the nurse manager role. As the shortage of nurses is likely to grow, it is important to be able to retain experienced nurses in the workforce until retirement age. This will benefit the public healthcare sector by reducing costs which are associated with turnover and further ensure its ability to provide high-quality patient care. Prolonging careers also reduces pressure on the public budget and the pension system. Recruiting new nurse managers with good leadership skills and providing leadership training and education for current nurse managers in order to help them to develop their leadership skills and improve work conditions is important in the effort to retain nurses longer in the workforce.

**Limitations of this Study.** There are several limitations of this study that need to be addressed. First, given the cross-sectional nature of the current study, we cannot establish the causality of the studied variables in the mediation model. More specifically, job satisfaction may influence employees' perception of job control, reward satisfaction and procedural and interactional justice, as well as work ability. In this study, based on the theoretical framework (Wang & Shi, 2014) and previous studies, we assumed that job satisfaction is partly built on these aforementioned factors, and that job satisfaction is associated with early retirement intentions (Wang et al., 2008). While the relationship between perceived leadership styles and job satisfaction has been previously established (Cummings et al., 2010; Sellgren et al., 2008), a longitudinal study setting is required to confirm the causal nature of the analysed variables. Furthermore, this study was only observational and the research design does not allow us to draw conclusions on the effectiveness of a possible intervention targeting nurses' perceived leadership styles.

Second, as the data were self-reported by the respondents, some bias may have influenced the results. Nevertheless, early retirement intentions have widely been considered as reliable indicators of transitioning into retirement (Wang & Shultz, 2010). However, we did not control for major chronic illnesses, which may have compromised our ability to account for health as a confounding factor in the regression for early retirement intentions. Third, there were some limitations related to the measures used in this study. Instead of using the complete Work Ability Index, we selected three items which we felt reflected the essence of work ability. Therefore, we acknowledge that our measure of work ability may be suboptimal in capturing perceived work ability among the respondents. Also, as this study was not designed to be



multi-level, we cannot pair the respondents with specific supervisors to determine whether or not the respondents had similar perceptions of the leadership styles. Finally, the study population consisted of registered nurses and other nursing personnel working in one Finnish university hospital, operating in the municipal sector. Therefore, the results can only be generalized to a limited extent. Future research should collect data from beyond the public healthcare sector. For example, by collecting additional data from different private sector organizations, generalizations could be made from the findings.

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## Conclusions

This study highlighted the importance of job satisfaction in the relation to individual and work-related factors and early retirement intentions. We found that job satisfaction was both directly associated with early retirement intentions and mediated the association between work ability, perceived leadership styles and early retirement intentions. Taken together, this study underlines the central role of job satisfaction and leadership styles in terms of late career intentions and the need for future studies in this field.

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