

Monika E. von Bonsdorff

Intentions of Early Retirement  
and Continuing to Work among  
Middle-aged and Older Employees



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## ABSTRACT

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Finnish summary

Diss.

The purpose of this study is to investigate personal, health, work, and work-related psychological factors in association with employee intentions of early retirement and continuing to work after retirement in the form of bridge employment. In addition, the study aims to further our understanding of what motivates older employees by investigating age-related differences in employee reward preferences. The study draws upon several theoretical perspectives, including continuity theory, the life course perspective, theories on motivation, and the meaning of work for older employees. Survey data from three individual research projects are used in this study - age management studies consisting of three separate hospital surveys collected from the Central Finland Central Hospital and Kuopio University Hospital, a longitudinal study on aging municipal employees (KVTEL 1981-1997) conducted by the Finnish Institute of Occupational Health between 1981 and 1997 and the Merit Principal Survey data collected by the U.S. Merit Systems Protection Board (MSPB) in 2000.

Good perceived health, good work ability and positive work-related psychological factors, such as the absence of negative perceptions about work, reward satisfaction, and high job control and job satisfaction are significantly associated with employee intentions to continue working instead of retiring early. This dissertation looks at gender-differences in the stability of predictors of early retirement intentions. Men seem to be more strongly affected by poor health in older age, whereas women seem to be more affected by the positive and negative psychological aspects of work from mid-life onwards. In addition, there are age-related differences in reward preferences. Older employees prefer financial rewards more than younger employees. Reward preferences and work motivation can partly be interpreted through motivation theories and the meaning of work for older employees. This study highlights the importance of organizational management practices in enabling older individuals to continue working longer. Understanding decisions in late-career in terms of timing, individual choices and psycho-physical entities can help us come to grips with the challenges of the aging workforce in future decades.

Keywords: early retirement intentions, bridge employment, reward preferences, well-being at work, continuity theory, life course perspective, older employees

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*Monika von Bonsdorff*

## LIST OF ORIGINAL PUBLICATIONS

The dissertation is based on the following papers, which will be referred to by their Roman numerals.

- I von Bonsdorff, M. E. Age-related differences in reward preferences. *International Journal of Human Resource Management*, in press.
- II von Bonsdorff, M. E., Koponen, S. & Aaltio, I. 2009. Staying in working life? Early retirement intentions among public sector nurses. In M. Beisheim, F. Maier, Kreil L. & B. Gusenbauer. (eds.) *Constructions of Women's Age in the Workplace*. Frankfurt am Main: Peter Lang, pp. 31-53.
- III von Bonsdorff, M. E., Huuhtanen, P., Tuomi, K. & Seitsamo, J. Predictors of employees' early retirement intentions: An 11-year longitudinal study. *Occupational Medicine*, in press.‡
- IV von Bonsdorff, M. E., Shultz, K. S., Leskinen, E. & Tansky, J. 2009. The choice between retirement and bridge employment: A continuity theory and life course perspective. *International Journal of Aging and Human Development* 69 (2), 79-100.

‡ An earlier version of this article was presented at the 24<sup>th</sup> Annual Conference of the Society for Industrial and Organizational Psychology, New Orleans, LA, 2-4.4.2009 in a symposium by J. Barnes-Farrel and A. McGonagle (chairs) Making Strides to Understand an Aging Workforce.

## ABBREVIATIONS

AARP	American Association for Retired People
AET	Arbeitswissenschaftliche Erhebungsverfahren zur Tätigkeitsanalyse, Ergonomic Job Analysis
95% CI	95% confidence interval
CSRS	Civil Service Retirement System
FERS	Federal Employees Retirement System
KEVA	Local Government Pensions Institution, Kuntien eläkevakuutus
KVTEL	The study on aging municipal employees, Ikääntyvien kuntatyöntekijöiden pitkittäistutkimus
MPS	Merit Principle Survey
MSPB	Merit Systems Protection Board
n	Number
NFI	Normed Fit Index
OASDI	Old Age, Survivors, and Disability Insurance
OR	Odds Ratio
RMSEA	Root Mean Square Error of Approximation
SD	Standard deviation
SPSS	Statistical Package for Social Sciences
SRMR	Standardized Root Mean Square Residual
SSI	Social Insurance Institution, Kansaneläkelaitos (KELA)
TSP	Thrift Savings Plan
TyEL	Employee Pension Act, Työeläkelaki
WAI	Work Ability Index
WLS	Weighted Least Squares
$\chi^2$	Chi-Square

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ABSTRACT

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ABBREVIATIONS

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# 1 INTRODUCTION

The workforce in Western countries is aging due to changes in global age profiles. Baby Boomers who were born after World War II will gradually retire during the period between 2008 and 2030, but because of falling birth rates far fewer employees will enter the labor market (Ilmarinen 2001; Hardy 2006; Hedge, Borman & Lammlein 2006). According to the United Nations World Population Prospects estimations, the proportion of people over 60 years of age in the entire population in 2050 will be 34.2 percent in Europe, 27.4 percent in the United States, 44.2 percent in Japan, and 31.1 percent in China (United Nations 2009). Global aging will have a significant social, political, cultural, and psychological impact not only on individuals, but also on national, international, and small-sized communities (Ilmarinen 2006). It will also have an effect on working life in terms of the possible lack of new workers entering the labor market, labor shortages, and the short term funding of pensions.

Statistics show that the employment rate among older men and women has steadily been growing in all of the European countries in the last ten years (Eurostat 2008). Nevertheless, several countries are currently struggling to find competent employees to replace those who are retiring (Hardy 2006). Amongst others, the Finnish municipal service sector, especially nursing, will be strongly affected by the aging of the workforce (Ilmarinen 2006), because this traditionally labor-intensive field will have to offer more services an aging population (Hancock et al. 2003). As opposed to several other European countries not many individuals migrate to Finland to become part of the labor force. In order for Nordic and European economies to survive, it will be essential for employees to continue working until the age of 63 to 65 or even longer. The issue of retiring later is particularly relevant, especially since the Prime Minister's Office (2009) in Finland recently published a report, which highlights the importance of older employee participation in the workforce in future years from the perspective of the national economy. The rapid global economic recession, which started in 2008, has temporarily taken attention away from the forthcoming age-crises in the workforce. However, the challenges have not receded. Once the economic tide turns, companies that are

being forced to lay off employees today might after a few years find it difficult to retain employees.

In recent years, most countries faced with an aging workforce have acknowledged the challenges and started to respond. The Nordic countries, especially Finland, are considered pioneers in promoting longer working careers. The main concern for the Finnish policy makers so far in the 21<sup>st</sup> century has been to encourage employees to continue working longer and retire later. In coming to grips with these challenges, Finland amended its retirement legislation in January 2005. Changes in the pension scheme were initiated after the realization that there were insufficient funds for future pensions, as well as by a desire to encourage employees to continue working longer. A flexible retirement plan, financial benefits for those who decide to continue working, and improved working conditions were introduced (Finnish Centre for Pensions 2008). Similar strides, such as the reduction of age discrimination and changes in retirement policies have been made in other European countries (Reday-Mulvey 2005). Hence, in order to encourage employees to continue to work, it has become more common in European Union countries to adjust working life to the needs of older individuals (Ilmarinen 2006).

Bridge employment, besides early retirement, is a central element of this dissertation. Bridge employment has been defined as the transition into some part-time, self-employment, or temporary work after full-time employment ends and permanent retirement begins (Feldman 1994; Shultz 2003). Bridge employment is fairly typical in the United States, though so far it has been relatively uncommon in Finland and other Nordic countries. The changes in the Finnish pension legislation in 2005 do, however, promote bridge employment. It might very well be that the national and organizational climate for bridge employment of older employees will change during the next decades in Finland. Including bridge employment in this dissertation will help to bring new information about this phenomenon to Finnish retirement research. Obtaining empirical data on Finnish employees who are retired and have continued to work either in the same profession or have changed professions altogether was not possible. Therefore, bridge employment will be explored within the U.S. federal government in this study.

By exploring age-related differences in employee reward preferences, this dissertation sheds light on age-related changes in work motivation. It has been stated that the older workforce will have an effect on the way in which organizations will be led and employees motivated in the future (Kanfer & Ackerman 2004). However, regardless of the growing number of aging employees, age-related changes in motivation (Kanfer & Ackerman 2004) as well as age-related differences in employee reward preferences have only rarely been explored (Doering, Rhodes & Schuster 1983). Knowledge on which rewards older individuals prefer can help employers attract, motivate, and keep employees working longer.

Aging and work, as well as retirement have been studied in past decades mostly from the economic, physiological, sociological, and psychological

perspectives (Feldman 1994; Shultz & Adams 2007). These studies have focused on macro-level phenomena such as labor conditions, developing pension systems, pension funding, and other political aspects of retirement. At the micro-level, the focus has been on individual aspects of the retirement process. Studies concerning the aging process, which is inevitably related to retirement, have provided information on the physical (Ilmarinen 2001, 2002; Savinainen 2004) as well as psychological capabilities of the individuals (Ruoppila et al. 2008) to perform at work. In recent years, early retirement has become more popular in the Western countries (Hakola & Uusitalo 2004; Börsch-Supan 2005). Hence, retirement is an increasingly important research issue in the future, due to the aging of the baby-boomer cohort (Beehr & Bennett 2007).

This dissertation sets out to capture the initial stages of the early retirement process described by Beehr (1986). Early retirement intentions start to form during a person's time of employment and evolve towards the decision to retire early. There are several theoretical models on retirement, albeit none of them have been developed specifically as theories of retirement (Beehr 1986). Studies on early retirement and bridge employment intentions described in this dissertation are largely based on the life course perspective (Elder 1995) and continuity theory (Atchley 1989). These theories offer a background for researchers to interpret and understand individual well-being and quality of life during retirement, gender and retirement transitions, and the predictors and antecedents of retirement-related decision-making.

Early retirement and bridge employment intentions as well as decisions have been associated with older age and health problems (Beehr 1986; Feldman 1994; Taylor & Shore 1995; Shultz, Morton & Weckerle 1998; Kim & Feldman 2000; Davis 2003; Karpansalo et al. 2004; Harkonmäki 2007; Shultz & Wang 2007; Wang et al. 2008), poor work ability (Tuomi et al. 2001), and poor sense of job control (Tuomi et al. 2001; Elovainio et al. 2005; Heponiemi et al. 2008). Some studies have reported high demands at work (Elovainio et al. 2005; Forma, Tuominen & Väänänen-Tomppo 2006; Siegrist et al. 2007) and other organizational and managerial factors (Sutinen et al. 2005) in relation to early retirement intentions, as well as work stress in relation to bridge employment (Wang et al. 2008; Gobeski & Beehr 2009). Early retirement decisions among older employees might also depend on spousal and familial factors (Talaga & Beehr 1995; Henkens & van Solinge 2002) and the financial situation of the older employee (Feldman 1994). In recent years it has been commonly acknowledged that well-being of individuals at work or other work-related psychological factors can be associated with the retirement decision-making process (Elovainio et al. 2005; Wang 2007; Wang et al. 2008; Gobeski & Beehr 2009). Not much previous research on these factors exist, and therefore, job satisfaction, intrinsic motivation, job-strain, and work stress as a part of work-related psychological factors ought to be examined more thoroughly within the context of retirement (Wang et al. 2008).

Employee well-being at work is typically dependent on a variety of factors, such as employee-supervisor relationships and organizational



management practices. The concept of work ability (Tuomi et al. 2001), which from an occupational health, well-being, and coping point of view indicates the balance between work and personal resources (Ilmarinen 2006), is another important issue in employee well-being at work. The concept of work ability has gradually evolved from a solely medical idea towards a more holistic and versatile concept (Ilmarinen 2006; Ilmarinen et al. 2008). In addition to individual resources, factors related to work, work organization, and life outside of work also come into play (Ilmarinen & Tuomi 2004; Ilmarinen 2006). The maintenance and promotion of work ability, as well as well-being at work requires co-operation between supervisor and employee (Ilmarinen 2006). The underlying assumption in this dissertation is that employee well-being and work ability can be supported by means of management (see Ilmarinen 2006). Moreover, despite short term economic shifts, employees are presumed to be an important asset to the organization, as in the resource based theory of the firms (Barney 1991). Focusing on employee well-being, work ability, and management-related factors in terms of early retirement intentions is important, since it might be possible to alter these intentions by means of management practices.

Regardless of the research traditionally conducted on early retirement, there is still much to be discovered in terms of what lies behind the retirement process. According to Beehr and Bennett (2007), new information might help us understand, predict, and plan for the possible effects of the baby boomers' aging on national and international economics and policies, on the organizations in which they currently work, and on the well-being of different generations. Several researchers have noted that the patterns of retirement have started to change especially during the 21<sup>st</sup> century. Instead of working for 40 years in one organization before retiring, it has become more common for older employees to continue their careers either part-, or full-time (Shultz 2003; Wang et al. 2008; Gobeski & Beehr 2009), and enter and exit the workforce several times during their careers (Johnson, Kawachi & Lewis 2009; Wang et al. 2009).

Self-reported empirical data for this dissertation was collected from Finnish municipal sector employees and U.S. federal government employees. Respondents answered questionnaires concerning their work, health, and personal factors as well as their perceptions regarding several work-related psychological factors. The aim was particularly to explore individual perceptions regarding factors related to early retirement intentions and employment in late-career. The main outcomes in this dissertation are employee early retirement and bridge employment intentions. Even if actual retirement decisions or transitions were not studied, previous studies have found that the intent to retire is a powerful indicator of the actual event of retirement (Beehr 1986; Ilmarinen 1999; Beehr & Bennett 2007; Harkonmäki 2007). Cross-sectional and longitudinal data on early retirement intentions was collected from the Finnish municipal sector in the 1980s and 1990s. In addition, data on early retirement intentions and reward preferences have been collected from public sector nurses in 2004-2005 and 2006-2007. The third set of data was collected on

retirement and bridge employment intentions among U.S. federal government employees in 2000.

The timing of employee retirement is largely dependent on societal and institutional settings (Moen 1996). At the time of the data collection for the current studies, the retirement age of employees was typically between 63 and 65, with some exceptions. Employees working in Finnish public sector and U.S. federal government positions were entitled to a pension once they had retired. However, the pension systems in Finland and the United States differ clearly from each other in terms of eligibility for pension and funding principles. When interpreting data on early retirement intentions, which has been gathered over a nearly 20-year period, one should consider the political and economic development in that time. The respondents in the studies included in this dissertation, have not faced the demands of downsizing or other severe economic crises. This means that the decision to retire early would have been voluntary (Beehr 1986; Gould 2006). Due to these facts, the data this dissertation is based on can be viewed as fairly cohesive.

Previous studies have failed to explore the stability of personal, health, and work-related psychological factors as predictors of early retirement intentions in middle-aged and older employees. This dissertation seeks in part to respond to this need. Recognizing early retirement predictors as early as mid-life could help organizations re-design work and management practices in order to keep employees working longer. The growing number of women participating in the workforce throughout the world has raised the question of gender-related differences in the retirement process (Talaga & Beehr 1995; Beehr & Bennett 2007). Previous studies have reported on gender-differences in retirement well-being (Moen 1996; Quick & Moen 1998) and in retirement behavior (Henkens & van Solinge 2002; Pienta 2003). This dissertation explores gender-differences<sup>1</sup> in the stability of several personal, health, and work-related psychological factors as predictors of early retirement intentions among middle-aged and older women and men.

More specifically, the aim of this dissertation is to explore several personal, health, work, and work-related psychological factors as antecedents and predictors of early retirement intentions. In addition, several personal and work factors as antecedents of intentions regarding full retirement, engaging in bridge employment in a different field, and career bridge employment will be investigated. Finally, a further understanding of the motivation of older employees work motivation will be gained by investigating age-related differences in employee reward preferences.

---

<sup>1</sup> Gender research has been linked to power relationships between men and women. In this dissertation, gender-differences in retirement decisions will be viewed from a life course perspective (Moen 1996; Quick & Moen 1998), in terms of gendered lives.

## **2 REVIEW OF THE LITERATURE**

### **2.1 Retirement at old age**

#### **2.1.1 Theoretical models of retirement**

Beehr (1986) states that even though there are several theories that have shaped thinking and retirement research, none of them were developed specifically as theories of retirement, but rather of the general aging process. More than twenty years since Beehr's (1986) statement, there still does not seem to be one particular theory that could help researchers in their effort to study retirement. Instead, to better understand retirement decisions, retirement transition, and retirement satisfaction at an individual level, researchers have lately turned to three dominant theoretical perspectives (Quick & Moen 1998; Wang 2007; Wang et al. 2008), namely continuity theory (Atchley 1989), role theory (Carter & Cook 1995; Ashforth 2001), and the life course perspective (Elder 1995). These theoretical perspectives have offered means for interpreting individual well-being and quality of life during retirement (Beehr 1986; Moen 1996; Quick & Moen 1998; Kim & Moen 2002; Wang 2007), gender and retirement transitions (Moen 1996; Quick & Moen 1998), and the antecedents of retirement related-decision making (Kim & Feldman 2000; Wang et al. 2008; Gobeski & Beehr 2009).

Studies on early retirement and bridge employment intentions described in this dissertation are largely based on the life course perspective (Elder 1995) and continuity theory (Atchley 1989). When looking closer at the theoretical considerations, it seems that when compared to role theory (Carter & Cook 1995; Ashforth 2001), continuity theory provides a new perspective that treats retirement as an opportunity to maintain social contacts, while avoiding the negative outcomes of retirement (Quick & Moen 1998; Wang et al. 2008). Furthermore, some researchers feel that the antecedents and consequences of bridge employment are perhaps best conceptualized in the context of continuity theory (Kim & Feldman 2000). In their recent study, Gobeski and Beehr (2009) pushed the utility of continuity theory further by interpreting the specific type

of bridge employment that people accept. The life course perspective in turn, emphasizes the influence of individual attributes, work-related psychological variables, and family-related variables in retirement related decision-making (Wang et al. 2008), and is therefore suited to the longitudinal study of early retirement intentions in this dissertation. Next continuity theory and the life course perspective will be described in brief.

#### *Continuity theory*

Continuity theory (Atchley 1989) posits that people who retire remain the same in terms of their psychological characteristics. The theory also argues that the identity and self-concept of the individual retiring does not differ before, during, or after retirement. In continuity theory retirement is not seen as a stressful disruption but rather as an opportunity to maintain a certain lifestyle and uphold social contacts (Quick & Moen 1998). The theory suggests that individuals who have been deeply involved in their work will try to sustain their daily routines by participating in activities they value highly (Gobeski & Beehr 2009). Moreover, individuals who have been highly committed to their jobs are more likely to seek continuity through some form of participation in working life (Atchley 1989). The work environment offers a natural way to maintain daily routines and engage in social interaction with colleagues, supervisors, and clients. For some individuals, maintaining these networks can influence the decision to continue at work instead of retiring early. Hence, bridge employment might offer an opportunity to keep up these social contacts and networks after full-time employment. Alternatively, Kim and Feldman (2000) state that aging and retirement can present an opportunity to engage in activities that aging employees value highly outside of work.

#### *The life course perspective*

The life course perspective (Elder 1995) is a broad approach to people's behavior and it subsumes other theories, such as role theory and continuity theory (Wang et al. 2008). According to the life course perspective, age-graded trajectories, for instance work and family, are subject to changing conditions and short-term transitions such as entry into retirement (Elder 1995). Retirement can also be seen as a life transition in an ongoing trajectory. In other words, the retirement experience might be influenced by previous events in life. In the life course perspective, it is essential to view lives in terms of timing and interdependence. Timing refers either to the historical location, time in one's life or to the social timing of transitions across the life course. Social interdependence of human lives refers to the interactive social worlds and networks that connect individuals and their life experience to the broader changes in society (Elder 1995). Transitions may be the most important concepts in the life course framework (Wang 2007). It has also been suggested that the life course perspective can offer a background for understanding the role of gender in terms of retirement transition and quality of retirement (Quick & Moen 1998).

In the retirement decision, the life course perspective can be described at the micro-, meso-, and macro-level (Szinovacz 2003). The micro-level refers to personal variables (health, personality, behavioral patterns), the meso-level to employers, labor unions, and conditions in the community, and the macro-level to government policies, labor market conditions etc. Due to timing and the interdependence of the age-graded trajectories in the life course perspective, all of the aforementioned contexts (Szinovacz 2003) jointly influence the path to the retirement decision (Kim & Moen 2002).

### **2.1.2 Gender and retirement decisions**

The number of women participating in the workforce has grown significantly in past decades. For instance, among women aged 16 and over, the workforce participation rate was 33.9 percent in 1950, compared with 59.8 percent in 1998 (United States Department of Labor 2000). In 2006, more than 67 percent of women and 71.4 percent of men participated in the Finnish workforce (Eurostat 2008). In light of these statistics, it is obvious that the number of women retiring will increase globally in future decades. In accordance with the life course perspective (Elder 1995), pathways to and throughout life transitions such as retirement are likely to differ between men and women (Quick & Moen 1998). Moreover, men and women experience retirement as a specific event differently in terms of overall life satisfaction (Martin Mathews & Brown 1988). Studies have also found that gender is essential in shaping the ways in which men and women experience the transition to retirement (Kim & Moen 2002).

Older women's retirement decisions can be influenced by their generation's traditional care giving and family roles (Talaga & Beehr 1995). However, some studies suggest that these roles are now changing and that gender equality is increasing (Smith & Moen 1998; Pienta 2003). As retirement and pensions are dependent on the length of a person's career, women are easily disadvantaged, as they are seen as the primary caretakers for children and, consequently, often have to face sole responsibilities for child-bearing and child-rearing. These responsibilities might result in women entering working life later and having discontinuous work histories. For these reasons, one must consider certain variables, such as whether they have dependents or what their occupational levels are, as well as their financial and employment status, when investigating employee's retirement decisions (Talaga & Beehr 1995; Beehr & Bennett 2007). Gender differences in connection with early retirement have mostly been studied in either all male or all female samples, and the findings of these studies have been inconsistent (Talaga & Beehr 1995; Moen 1996; Beehr & Bennett 2007).

However, some studies have explored gender differences in early retirement and bridge employment decisions. Contrary to their hypothesis, Adams and Beehr (1998) found that women were not more inclined to consider retirement compared to men. Furthermore, Talaga and Beehr (1995) showed that women were less likely to retire than men. Despite the findings regarding gender and early retirement, according to recent research results, women are

less likely to engage in bridge employment compared to men (Davis 2003; Wang et al. 2008). Johnson, Kawachi and Lewis (2009) found that changing occupation late in life is more common for men than women, because women who leave their employer in their fifties are less likely to attain new employment. In some sense, the impression that women experience more exits and entries from the workforce (Talaga & Beehr 1995) and are economically disadvantaged (Davis 2003) seems to be somewhat outdated (Smith & Moen 1998; Pienta 2003).

## **2.2 Retirement and working life**

### **2.2.1 Pension system in Finland**

According to the Employee Pension Act (TyEL) from the beginning of 2007, all Finnish citizens over 16 years of age who live permanently in Finland are insured by the residence-based national pension system, which is administered by the Social Insurance Institution, SII (KELA). This system provides a minimum income for retired individuals. Social security in Finland is handled jointly by the state and the local governments. In case of unemployment or disability, the individual is entitled to certain benefits, such as unemployment benefits or rehabilitation benefits and disability pensions. In addition, basic and specialized medical care, provided by the twenty regional health districts, is available to all Finnish residents and individuals arriving in Finland from other European Union Member States.

The employment-based earnings-related pension system provides income for employees after retirement or in case of death in the family or injury. This pension is linked to earnings and is administered by several pension providers in the private sector and by the Local Government Pensions Institution (KEVA) and State Treasury (Valtiokonttori) in the public sector (The Finnish Pension System 2007.) Together these systems are designed to ensure a 60-66 percent pension provision of the wages or salary on which the pension is based. Pensions are financed jointly by the government, employers, and tax revenues. The benefit systems, which include early exit and other income security arrangements, have traditionally been negotiated between labor market and other interest organizations (Hytti 2002).

Retirement has been institutionalized as a natural event in the life course of older employees in most Western countries in the 20th century. The Finnish pension system was formed during the 1930s, when the society started to change from agricultural to industrial and informational. The National Pensions Act, which guaranteed a small income to all retirees, was introduced in 1937. Slowly, a national pension system was formed in co-operation between employers, the state and municipalities. Later, in 1961, an earnings-related employment pension scheme was introduced.

After the Second World War, Finland was rebuilt by a large group of men and women, whose pension security was improved in the 1970s and 1980s. The aim was to ensure a flexible retirement age for these people. The simultaneous growth of the public economy made it possible to let employees retire early. In addition to old age pensions, possible exit routes from the labor force through unemployment and disability pathways were included before 2004 (Hytti 2002). The Finnish economy went into deep recession, lasting approximately from 1991 to 1993. The poor financial situation forced companies to cut back on personnel costs. Older employees were forced to take an unemployment pension, whereas younger employees were laid off. During that time strides were taken by the government to control early exit by means of raising the age limits of unemployment and individual early retirement pensions.

After the recession, Finland faced a new totally different kind of a challenge. As the Baby Boomer generation moved towards retirement, there were not enough young employees entering the labor market. This made it imperative to alter the retirement system. Before 2004, employees had to retire at the age of 65, with the exception of some occupation-specific lower retirement ages (e.g. nurses, bus drivers). In addition to disability, unemployment and individual early retirement pensions were options for exiting working life (Hytti 2002). Employees could apply for an individual early retirement pension at the age of 58. In order to receive early retirement, employees had to have a permanently reduced working capacity, a long work history, and a reduced capacity to cope with work demands.

The retirement legislation in Finland was renewed in January 2005. These changes in the pension scheme were in response to the realization that there was insufficient funding for future pensions, and because of a desire to encourage employees to continue working longer. After the changes in the pension scheme in 2005, municipal employees could choose to retire between the age of 63 and 65, with the right to continue working until the age of 68. Retirement is possible at the age of 62, but it came at the cost of a lower pension. The individual early retirement pension was abolished from individuals who were born after 1943, and the unemployment pension from individuals born after 1949. A flexible retirement plan, financial benefits for those who decided to continue working, and improved working conditions were all introduced. Continuing to work after the official retirement age increases the pension considerably. Another significant change concerns pension accrual. Before January 2005, the level of pension was determined by the earnings of the last few years of work. After the change in legislation, starting from the age of 18 the annual earnings accrues into a pension over the person's entire working career. (Finnish Centre for Pensions 2008.)

Even if the 2005 pension reform changes has been significant, the pension system still contains some incentives to retire early, such as unemployment and disability pathways (Börsch-Supan 2005). For instance, the unemployment tunnel allows special provisions for long-time elderly unemployed at the age of 57. Nevertheless, according to research done before the economic decline in

2008, the 2005 pension reform has been partly successful in increasing the retirement ages of older employees (Tuominen 2007). At the same time, it has been recognized that the factors that influence early and late retirement are complicated. The employment growth in the number of older employees can partly be explained by the strong growth in the economy (Tuominen 2007), which lasted until 2008. The full effect of the pension reform remains to be seen in the years to come. Meanwhile, there has been pressure from the government to raise the retirement age to 65 (Prime Minister's Office 2009).

## **2.2.2 Pension system in the United States**

The United States introduced the Social Security Act in 1935, which ensured employees means of income once they turned 65 (Social Security Act 1935). Since then retirement has become an almost universal event occurring in later adulthood (Moen 1996). Later in 1986, the mandatory retirement age of 65 was abolished. This meant that employees, whose life expectancy had grown significantly during those fifty years, could work until the age of 70 or 75 if they chose to do so. Nevertheless, from the 1980s onward there has been a trend to offer early retirement packages to older employees in the United States. Subsequently, companies have eagerly employed younger employees. Overall, one could say that cultural and economic norms defined the age of retirement, instead of factors related to health and personal wealth (Sheppard & Rix 1977).

The pension system in most countries is composed of three parts - minimum pension security, employee pension security, and additional pension security. In the United States, the statutory minimum pension security is handled by social security. The Social Security Administration governs the OASDI (Old Age, Survivors, and Disability Insurance) program, which provides an income for those who are not entitled to employment-based pensions, or those whose employment-based pension does not guarantee them a minimum income level (Bach-Othman 2006). The employer, employee, and the state contribute to OASDI. The old age pension age is 65 years and 8 months, but it will gradually rise to 67 years by the year 2027 (Social Security Administration 2009).

Employment-based pensions consist mainly of defined-benefit and defined-contribution plans (United States Department of Labor 2009). These plans cover some 60 percent of employees, and thus offer an important addition to pension incomes (Bach-Othman 2006). In recent years there has been an increase in the use of defined-contribution pension plans relative to defined-benefit plans. In the defined-benefit plan, the plan sponsor bears the investment risk, whereas in the defined-contribution plan, the benefits are linked to the investment performance. Both plans have recently suffered setbacks, as employers have been forced to drop their defined-benefit plans when a number of faced with bankruptcy. The recent plunges in the stock market have in turn jeopardized the defined-contribution plans. According to Giandrea, Cahill and Quinn (2009) retirees in the future can adapt to their potentially lower incomes



either by lowering consumption levels during retirement or by delaying retirement and remaining longer in the workforce.

Closely connected to the pension plans is the health insurance of older individuals. Since the United States does not provide universal health insurance for its citizens, health care benefits are often connected to employee benefit packages. Health insurance is especially important to middle-aged employees, who do not yet qualify for Medicare, which is the United States health insurance program administered by the United States government. Since Medicare provides health insurance coverage mainly to people who are aged 65 and over, it can be important for employees to continue working until they become eligible for Medicare. On the other hand, increased health insurance costs for employers might hinder them from hiring and retaining older employees. (Hedge, Borman & Lammlein 2006.)

In recent decades, several changes in the Social Security retirement policy act as incentives for older Americans to remain longer in the workforce (Hedge, Borman & Lammlein 2006). The level of pensions have been scaled back, the age at which retirees can receive full pension benefits has been raised from 65 to 67, and several other changes have been made to increase work during later life. Employees who engage in work after they have reached their full pension age will not face deductions in their pensions (Bach-Othman 2006).

U.S. federal government employees receive a pension from the Thrift Savings Plan (TSP). TSP is a retirement savings and investment plan the purpose of which is to provide retirement income for all eligible federal employees. Employees belong to either the Federal Employee Retirement System (FERS) or to the Civil Service Retirement System (CSRS). CSRS was replaced in 1987 with FERS, which in many ways encourages employees to continue working longer compared to the former retirement system (Asch & Warner 1999). Thrift Savings might have an effect on federal employee retirement intentions, since entering bridge employment in a different field and transferring the funds to another retirement system, such as a 401(k) plan (defined-benefit or defined-contribution plan), might prove to be expensive in terms of taxes (Thrift Saving Plan 2008).

### **2.2.3 Early retirement**

Early retirement is a form of job withdrawal and has been defined as leaving a position or career path of long duration before the age of 65 years (Hanisch & Hulin 1990, 1991; Feldman 1994). Unlike turnover, retirement means the end of work after a career of full-time jobs, and it suggests some psychological withdrawal from work as well (Feldman 1994). In most Western, and especially European countries, retirement can still be defined in this way. In the United States, since it has been typical for employees to continue working even after retirement, the timing of retirement has been more difficult to determine. According to Beehr (1986), defining retirement is relatively complex and there is no reason to expect different types of retirement to be equivalent in their causes

or consequences. As retirement and the options for early retirement differ across nations, one has to be very precise when defining the concepts.

Retirement can be voluntary or involuntary, early or on-time, and complete or partial. Voluntary retirement in Finland typically means retirement at the official retirement age or taking the option of retiring earlier at the expense of a lower pension. A disability pension can be taken as a form of voluntary retirement, whereas using an unemployment pension as a means of retirement (often used as a means of downsizing) can be either voluntary or involuntary. Pensions, especially the unemployment tunnel, can be used to regulate labor supplies (Hytti 2002). The decision to retire early or late often results from the interplay of choice and chance. Gould (2006) found that life chances in terms of achieving higher socioeconomic status, having better control over work, and better health enabled older employees the choice of late retirement. When compared to most of Europe, the voluntary nature of retirement is more difficult to determine in the United States. As stated earlier, employees depending on defined-benefit and defined-contribution plans might not receive them due to an economic down turn. On the other hand, employees might be offered generous early retirement packages, which can be hard to decline, especially during a time of economic recession. (Hedge, Borman & Lammlein 2006.)

The decision to retire early is typically preceded by intentions of early retirement (Beehr 1986). Most of the research to date considers early retirement to be a process, which begins with early retirement intentions and ends with adjusting to a new phase in life brought on by the decision to withdraw permanently from working life. The retirement process and early retirement varies from country to country due to economic and cultural factors, as well as legislation and pension systems. Furthermore, pension systems in Finland and in the United States differ from each other significantly. Nevertheless, both of these pension systems strive towards rising the retirement ages and encouraging employees to stay at work longer, thus discouraging employees from retiring early. The reasons behind these actions are mainly economic. As research points out, generous early retirement provisions exacerbate the financial distress of the current under-funded security systems by increasing the dependency ratio (Conde-Ruiz & Galasso 2003; Ilmarinen 2006). Despite the efforts of the labor market organizations, many Finnish employees retire before their official retirement age (Harkonmäki 2007; Finnish Centre for Pensions 2008).

Due to the nature of the retirement process, early retirement intentions would best be studied in a longitudinal setting, where data gathering starts while people are working and extends into their retirement. Unfortunately, this kind of data rarely exists (Beehr 1986; Wang et al. 2008; Gobeski & Beehr 2009). In this dissertation early retirement intentions will be used to reflect on the actual decision to retire early, due to data at hand. A study by Prothero and Beach (1984) on retirement expectations, intentions, and actions regarding the timing of retirement showed that retirement intentions are a valid proxy for

actual retirement behavior. The intent to retire has since been found to be a powerful indicator of the actual event of retirement (Beehr 1986; Ilmarinen 1999; Beehr & Bennett 2007; Harkonmäki 2007) and it has been widely used in previous studies.

#### **2.2.4 Bridge employment**

Bridge employment has been defined as the transition into some part-time, self employment, or temporary work after full-time employment ends and permanent retirement begins (Feldman 1994; Shultz 2003). When viewed in this way, bridge employment makes the retirement process seem like a continuum (Beehr & Bennett 2007). According to recent studies, engagement in bridge employment is often caused by the motivation to adjust to life after retirement (Wang 2007; Wang et al. 2008). When compared to engagement in bridge employment, the reasons behind full retirement are often quite different and may include poor health (Kim & Feldman 2000). An American Association of Retired People (AARP) report on re-careering in later life found that older employees who change jobs and especially careers, typically downshift into part-time work, which involves less stress and responsibility, and more flexible working hours (Johnson, Kawachi & Lewis 2009). Factors associated with bridge employment will be described in detail in the following section.

Feldman (1994) in turn, approached the early retirement process from a decision-tree framework and found that in the first phase, the aging employee has to make the decision between whether or not to retire. If the individual decides to retire, the next decision is whether or not to engage in bridge employment in the same industry as their career jobs (career bridge employment) or change fields/organizations altogether (bridge employment in a different field) or simply stop working altogether (Feldman 1994). Only the most recent studies have taken these different types of bridge employment into consideration and have succeeded in establishing different antecedents for the two types of bridge employment (Wang et al. 2008; Goebeski & Beehr 2009).

Even if early retirement and bridge employment occur in later life, it is important to consider them separately in terms of factors that influence the decision to retire fully or to engage in bridge employment (Beehr & Bennett 2007). Past research on early retirement has been criticized for not taking bridge employment into consideration and determining if bridge employment is contained in the retirement decision (Feldman 1994; Weckerle & Shultz 1999; Shultz 2003; Shultz & Adams 2007). Furthermore, studies into bridge employment are severely lacking in cross-cultural comparisons, since most of the research has been done on data gathered in the United States (Shultz 2003).

Bridge employment or part-time work among older employees is becoming more popular in the European Union, Australia, and the United States (Shultz 2003). Still, it is not yet very typical for older Finnish employees to retire and continue working in the same or another profession, even though the changes in the pension scheme in 2005 (Finnish Centre for Pensions 2008) have made this alternative more attractive both for the employee and the

employer. In the United States it has been fairly common for older workers to participate in some form of bridge employment since the 1990s, and the trend is likely to continue (AARP 2002; Adams & Rau 2004; Giandrea, Cahill & Quinn 2009). In fact, the Bureau of Labor Statistics (2009) has estimated that between 1993 and 2008, the labor force participation rate at ages 65 to 69 has grown for men from 25.4 percent to 35.6 percent and for women from 16.1 percent to 26.4 percent in the United States. Hence, one way to alleviate the forthcoming labor shortages is to encourage employees globally to engage in bridge employment (Weckerle & Shultz 1999; Kim & Feldman 2000; Shultz 2003; Adams & Rau 2004; Rau & Adams 2005; Wang et al. 2008).

### **2.2.5 Antecedents and predictors of early retirement intentions, early retirement, and bridge employment**

Research into the causes of the decision to retire tends to focus primarily on voluntary retirement instead of involuntary (Beehr 1986). The underlying assumption is that the retirement decision is to some degree voluntary. Early retirement has typically been explored from the age and health point of view in Europe, Nordic countries, and in Finland in particular. This is partly due to the disability pension as a central early exit route from working life along with the unemployment pension (see Gould 2006; Harkonmäki 2007). An individual receiving the disability pension has most likely been diagnosed with an illness, defect, or injury, which hinders him or her from working. Recently, studies have started to focus more on the role of work-related factors and employee well-being in employee retirement intentions (Tuomi et al. 2001; Elovainio et al. 2005; Sutinen et al. 2005; Forma, Tuominen & Väänänen-Tomppo 2006).

Early retirement has been studied in the United States over several decades (Shultz & Adams 2007). Besides age and health factors, these studies have to some extent focused on financial, personal, and work-related factors as predictors of early retirement. It is understandable that studies have focused on different factors, since the legislation, culture, and process behind early retirement differs across nations. Bridge employment has been studied since the beginning of the 1990s (Feldman 1994). Later, criticisms have been expressed due to the fact that studies on bridge employment and its antecedents have mostly concentrated on personal factors and have largely ignored organizational (Weckerle & Shultz 1999) and work-related psychological variables (Wang et al. 2008).

In his classical article, Beehr (1986) points out that since there are little means to study the retirement process in an experimental setting, one should not refer to causality or causes of retirement decisions. The preferable term is predictor. In this dissertation, when utilizing cross-sectional, data I will use the term “antecedent of early retirement/bridge employment intentions” or “associations between certain variables and early retirement/bridge employment intentions”. The term “predictor of early retirement intentions” will be used when describing the longitudinal study.

In this dissertation, findings on several antecedents and predictors of early retirement and bridge employment intentions will be presented. The factors studied are based on previous research on early retirement (Beehr 1986; Feldman 1994; Taylor & Shore 1995; Adams & Beehr 1998; Kim & Feldman 1998; Shultz, Morton & Weckerle 1998; Tuomi et al. 2001; Elovainio et al. 2005; Shultz & Wang 2007; Siegrist et al. 2007) and on bridge employment (Kim & Feldman 2000; Davis 2003; Wang et al. 2008). The studies included in this dissertation draw upon continuity theory and the life course perspective. Even if the retirement process has been widely studied, consensus on the predictors of early retirement or bridge employment has yet to be reached (Beehr 1986; Shultz 2003). Thus, the aforementioned theories offer both a rationale for selecting a broad set of predictors of retirement decisions and a comprehensive framework for interpreting employee behavior (see Wang et al. 2008).

The aim throughout the dissertation is to include more work-related psychological variables into the studies on early retirement and bridge employment intentions. By doing so, whether or not these factors are of significance in the process of early retirement and engaging in bridge employment can be evaluated. Next, some previous studies on factors associated with early retirement intentions, early retirement, and bridge employment will be briefly introduced.

#### *Personal and health factors*

Age has an indisputable effect on employees' ability to continue working. The older the employee becomes, the more unlikely s/he is to achieve continuity in life through work, due to health limitations. Even if age per se does not serve as a proxy for health, both physical and mental capacities tend to decline as employees age. At the same time, the pressure to stop working increases in old age due to the institutionalized perception of retirement. According to several studies, the tendency to retire will increase (Beehr 1986; Taylor & Shore 1995; Kim & Feldman 1998; Kim & DeVaney 2005; Shultz & Wang 2007) and at the same time the desire to engage in bridge employment will decrease (Kim & Feldman 2000; Davis 2003; Adams & Rau 2004; Cahill, Giandrea & Quinn 2006; Wang et al. 2008) as employees age.

The effect of gender in retirement decisions has largely been neglected in previous studies (Talaga & Beehr 1995; Moen 1996; Beehr & Bennett 2007), despite the fact that retirement as a life course event (Quick & Moen 1998) and the experience of retirement (Martin Mathews & Brown 1988) can be gender-dependent. Until recently, studies have mainly utilized all-male data. The existing findings regarding gender and retirement decisions are controversial. There has been some indication that retirement decisions among older women can be influenced by their generation's traditional socially oriented gender roles (Talaga & Beehr 1995). For instance, retirement decisions can be connected to the number of dependents. Talaga and Beehr (1995) showed that for women the likelihood of being retired grew significantly as the number of dependents increased. In the wider perspective, women's retirement is more heavily dependent on familial and spousal characteristics (Pienta 2003). In a Finnish

study, Harkonmäki (2007) found that the prevalence of strong early retirement intentions and the risk of disability retirement were higher among men than women. Kim and DeVaney (2005) found that women were more likely to continue working instead of partial retirement when compared to men (see also Adams & Beehr 1998). This might be an indication of women having discontinuous careers and therefore wanting to remain in their full-time jobs. Despite the findings regarding gender and early retirement, according to recent research results, women are less likely to engage in bridge employment compared to men (Davis 2003; Wang et al. 2008).

As Shultz and Adams (2007) point out, in order to better understand the retirement process, a growing number of researchers are turning their attention to the role of family, spouse, and interests outside of work as antecedents of retirement decisions (Beehr & Bennett 2007). The employment status of the spouse has been found to be associated with an employee's desire to engage in bridge employment (Kim & Feldman 2000) and intent to retire early (Seitsamo 2005). A longitudinal study on work-family conflict and retirement preferences found that regardless of gender, individuals experiencing higher levels of work-family conflict also tended to have higher preference for retirement by 52-64 (Raymo & Sweeney 2006). In turn, Wang et al. (2008) did not discover a connection between family-related variables and bridge employment decisions. In addition to spousal and familial factors (Talaga & Beehr 1995; Henkens & van Solinge 2002; van Dam, van der Vorst & van der Heijden 2009), the early retirement decisions might depend on the financial situation of the older employee (Feldman 1994).

The level of education is a potential antecedent of early retirement and bridge employment intentions. The level of education is associated with employee skills and ability to perform at work. A low level of education will often limit the ability to adapt to changes in work life. This in turn can ultimately result in skill obsolescence (Beehr 1986). Modern jobs in the information society that typically require a higher level of education tend to be less physically demanding and would therefore be better suited to older employees than the physically demanding jobs of just a generation ago (Ilmarinen 2002; Shultz & Wang 2008). A recent study by Wang et al. (2008) found that a higher level of education was associated with employee desire to engage in bridge employment (see also Kim & DeVaney 2005). However, higher education did not predict engagement in career bridge employment - on the contrary it was associated with bridge employment in a different field (Wang et al. 2008). Besides formal education, employees typically gather much work-specific knowledge during their long careers. Gobeski and Beehr (2009) found that employees with better job-related skills were more likely to engage in career bridge employment over non-career bridge employment or full retirement.

The health of older workers is one of the most powerful factors influencing the decision to retire (Beehr 1986; Feldman 1994; Taylor & Shore 1995; Kim & Feldman 1998; Shultz, Morton & Weckerle 1998; Karpansalo et al.

2004) and to engage in bridge employment (Kim & Feldman 2000; Wang et al. 2008). Employees experiencing severe health problems, such as lung disease (Shultz & Wang 2007) or poor mental health (Harkonmäki 2007), are likely to consider early retirement. As Kim and Feldman (2000) have stated, even if employees could perform at their jobs, but were having serious health problems, they may want to spend the limited time they have available with family and friends. Thus, health problems are likely to cause interruptions in employees' lives in terms of continuity.

Additionally, several studies have addressed the role of income in retirement-related decisions. Some have looked at income and pension benefits in relation to early retirement (Beehr 1986; Kim & Feldman 1998) while others have focused on financial factors as antecedents of engagement in bridge employment (Feldman 1994; Weckerle & Shultz 1999; Kim & Feldman 2000). Previous studies have indicated that people with more financial resources will be more likely to retire early (Kim & DeVaney 2005). In turn, financial distress works as a stimulus for the retirees to engage in bridge employment (Shultz 2003; Dendinger, Adams & Jacobson 2005). Feldman (1994) and Kim and Feldman (2000) hypothesized that the greater an individual's current wage and expected future pension benefits are the more likely s/he is to retire instead of accepting bridge employment. In addition, employees are likely to seek financial benefits which help ensure their retirement incomes (Feldman 1994; Weckerle & Shultz 1999; Kim & Feldman 2000).

Several non-work-related constructs, such as personality traits, life satisfaction, family-related concerns, and the physical and cognitive effects of aging should be considered in research on retirement decisions (Gobeski & Beehr 2009). Non-work interests can also be a significant source of continuity for employees who do not experience continuity through their work. As a result these individuals may be more likely to seek retirement instead of work in order to achieve continuity in their lives (see Atchley 1989). The influence of individual attributes and family-related variables in employee retirement and bridge employment decision-making can also be interpreted from the life course perspective (Wang et al. 2008).

#### *Work factors*

Work plays a significant role in the lives of most Western employees. Work is the main source of daily routines in the lives of older employees (Atchley 1989). This means that continuing to work enables employees to maintain not only their work identity, but also a satisfying level of social contact. Retirement and bridge employment decisions are largely dependent on government and social policies. It is not uncommon for employees facing retirement in the 21<sup>st</sup> century to be in a position which allows them to continue working due to the increasing need for employees in numerous fields and industries. In this sense, the opportunities for bridge employment might be understood in terms of timing. Several studies have found that opportunities for bridge employment are positively connected to decisions to engage in bridge employment (Feldman 1994; Kim & Feldman 1998; Davis 2003).

Occupation is a broad proxy for specific work characteristics, which makes it difficult to interpret the role occupation plays in retirement decisions (Wang et al. 2009). Yet, as employees age, their functional capacity has been shown to deteriorate and symptoms of strain increase (Huuhtanen et al. 1997; Bassey 1998). Due to these changes, it is essential to maintain and promote the health and work ability of aging employees in terms of their health and mental resources and their resulting ability to do the job (Ilmarinen, Tuomi & Seitsamo 2005). For example in Finland most of the older women, whose work ability tends to be poor, especially with regard to physical work demands (Gould & Polvinen 2008) are working in physically demanding basic service occupations. In this sense, modifying work to fit the resources of the older employee is essential (Ilmarinen 2006).

According to several recent studies, a central element in keeping older employees at work is to present them with challenging tasks, opportunities to further develop their skills, and to receive a fair amount of pay in return for their inputs (Adams 1999; Dendinger, Adams & Jacobson 2005; Loi & Shultz 2007; van Dam, van der Vorst & van der Heijden 2009). Nevertheless, research is not unanimous when it comes to occupational goal attainment and retirement decisions. Adams (1999) found that employees who felt that they have accomplished their goals in working life sensed that they were ready to retire, instead of pursuing new goals. Thus, researchers have hypothesized that goal attainment is specifically related to career bridge employment (Gobeski & Beehr 2009).

#### *Work-related psychological factors*

The role of psychosocial factors at work has become more significant since Karasek (1979) introduced the job demand - control model. The employees' potential for having an influence at work is closely related to this concept. Nevertheless, according to Elovainio et al. (2005), only a few studies have concentrated on job control and early retirement. Elovainio et al. (2005) found that both high job demand and low job control independently predicted early retirement, even when adjusted for age, gender, education and self-rated health (see Sutinen et al. 2005; Heponiemi et al. 2008). Siegrist et al. (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. The study on Finnish municipal employees revealed that good opportunities for influence at work was a predictor of good self-perceived work ability, which in turn predicted low early retirement intentions (Tuomi et al. 2001).

Physical health and mental well-being are central aspects of employees' ability to work. Work ability has been conceptually defined as the measure of how good the worker is at present and will be in the near future, and how able s/he is to do his or her job with respect to the demands of the job and their health and mental resources (Ilmarinen, Tuomi & Seitsamo 2005). Work ability can be promoted with the means of management. This includes taking work demands, the environment, work organization, and an employee's health,



functional capacity, and competences into consideration (Tuomi et al. 2001). The work ability of aging employees, especially in the age group between 52-58 years, tends to decline dramatically (Ilmarinen & Tuomi 2004).

Work can be a significant positive force and a source of engagement or a negative factor leading to burnout and ill-health (Hakanen, Perhoniemi & Toppinen-Tanner in press) throughout the lives of employees. Individuals who are satisfied with their jobs are less likely to engage in any type of withdrawal behavior, such as turnover or early retirement (Adams & Beehr 1998). On the other hand, unfavorable psychosocial working conditions and job dissatisfaction can be clearly related to early retirement intentions (Saurama 2004; Harkonmäki 2007). It has been hypothesized that individuals who are satisfied with their current jobs will want to engage in career bridge employment (Gobeski & Beehr 2009).

Negative forms of work-related affects or work stress have been linked to retirement decisions in that employees experiencing work stress were more likely to seek full retirement instead of bridge employment (Wang et al. 2008; Gobeski & Beehr 2009). Shultz, Morton and Weckerle (1998) found earlier that dissatisfaction with one's career or job sometimes acts as a push factor in the retirement decision. Negative perceptions about work, which for instance can include frequent feelings of reluctance towards work and an overall feeling of apathy, can be associated with work stress. Recent studies have shown that age-friendly organizational policies and HRM-practices are becoming more important for employees when considering both retirement (Shacklock 2005) and continuing to work (Shacklock, Brunetto & Nelson 2009).

In addition to the previously described financial factors, a broader concept of reward satisfaction ought to be considered in terms of retirement intentions. An adequate salary and financial rewards are still widely seen as effective means for keeping employees working. Nevertheless, a recent study indicated that older employees might change jobs in the hope of finding a more meaningful job, even if this sometimes means settling for lower pay (Johnson, Kawachi & Lewis 2009). Other studies have also shown that rewarding through financial means may not be the most effective when aiming to keep employees at work longer (Minnick 2000; Elovainio et al. 2005); although different opinions have been put forward with regard to this matter (Cotton & Tuttle 1986; Miceli et al. 1991; Currall et al. 2005). Total rewards, which take aging employees into consideration, is surely an effective means to tackle the forthcoming lack of employees (Van Dalen & Henkens 2002; Hasselhorn, Müller & Tackenberg 2005).

## **2.2.6 Rewarding and motivating aging employees**

According to work motivation theories, rewards motivate individuals because of their ability to satisfy various human needs. When we consider organizations today, we can see that in many aspects we have come a long way from the era of Frederic Taylor's Scientific Management to the modern theories in work motivation. More specifically, content theories, such as Maslow's needs

hierarchy (1954) and Herzberg's Motivation-hygiene theory (Herzberg, Mausner & Snyderman 1959) focus on the types of rewards that individuals prefer. It has been widely established by classical research that work has a deeper meaning to employees; it is a source of job satisfaction (Maslow 1954; Herzberg, Mausner & Snyderman 1959; Pfeffer 1998; Steers, Mowday & Shapiro 2004).

Work motivation is mainly concerned with factors or events that strengthen, channel, and sustain human behavior in organizations over time (Steers, Mowday & Shapiro 2004). It can also be described as a set of internal and external forces that initiate work-related behavior (Pinder 1998) and where the influence of both environmental forces and forces inherent in the person are being recognized (Ambrose & Kulik 1999). Work motivation has been widely studied in recent decades. Along with increased attention to needs there has also been a resurgence of interest in individual differences, particularly with regard to the effects of job characteristics on employee motivation (Latham & Pinder 2005).

According to Kanfer and Ackerman (2004), work motivation varies with age, which should be taken into consideration when developing a person-oriented theory of work motivation. Yet, most of the research in the field of work motivation has been on young adults, which lets age-differences go unnoticed. One of the most recent developments in research regarding work motivation is the critical perspective on the implications of age for work motivation (Steers, Mowday & Shapiro 2004). According to researchers, any theory that can account for age-related differences in work motivation must go beyond the chronological age and focus on the aging of individuals rather than that of one coherent group (Kanfer & Ackerman 2004).

Reward preferences, including financial and non-financial elements are closely related to work motivation. Employees typically prefer certain rewards to others. It is also widely acknowledged that some reward elements motivate employees more than others (Stajkovic & Luthans 2001). Rewards and pay in its various forms have typically been linked to core organizational outcomes (Ambrose & Kulik 1999; Stajkovic & Luthans 2003; Steers, Mowday & Shapiro 2004). According to behavioral management principles, different incentives, such as money, feedback, and social recognition have an effect on employee task performance (Stajkovic & Luthans 2001, 2003). Financial and non-financial incentives have also been linked to several business-unit outcomes, such as profit, customer service, and employee turnover (Peterson & Luthans 2006).

Only a few studies have examined age-related differences in individual reward preferences (Doering, Rhodes & Schuster 1983) or in work motivation (Kanfer & Ackerman 2004). Some previous studies have indicated that preferences shift from pay raises to other benefits and at the same time become more diverse as employees age (Doering, Rhodes & Schuster 1983). Consensus, however, is yet to be reached in this matter, since other personal characteristics might have dramatic effects on employee reward preferences. The same dilemma applies to several issues regarding motivation and development

across the life-span. Kanfer and Ackerman (2004) have pointed out that it is important in life-span development research to consider both inter-individual as well as intra-individual differences during changes in individual development. Collecting longitudinal data on individuals can partly solve this issue, since it allows researchers to follow the same individuals and hence evaluate the cohort-effect. Correspondingly, inter-individual differences (individual change during development) in reward preferences could best be explored in longitudinal studies.

Some classical studies have been analyzed by Doering, Rhodes and Schuster (1983), and they found that older employees preferred pension and other related benefits and at the same time were willing to forego pay increases, additional vacations and shorter working weeks in order to acquire them. When considering these results, one has to take into account changes in rewarding, cultural differences, and the effect inflation would have on reward references, as Doering, Rhodes and Schuster (1983) point out.

In order to better understand the reward preferences of older individuals we can turn to studies that have focused on employment searches of older employees (Mor-Barak 1995; Loi & Shultz 2007) and reasons for working (Dendinger, Adams & Jacobson 2005). These studies have successfully adapted Mor-Barak's (1995) Meaning of Work Scale, which is originally based on Alderfer's (1969) human needs theory. This three-factor model consists of financial, personal, and social factors. Later, a generativity factor was added to the original scale, which indicates older adult's view of work as a means of sharing their knowledge and experiences, and transmitting ideas and values to younger generations. According to McAdams, de St. Aubin and Logan (1993), adults can express generativity through nurturing, teaching, leading, and promoting the next generation. Generativity also provides a means to generate life products and outcomes that aim to benefit the social system at large, and promote continuity from one generation to the next (McAdams, de St. Aubin & Logan 1993).

The four factors related to employment searches among older employees can easily be linked to both financial and non-financial rewards. The financial factor comprises of incomes and benefits associated with work, whereas the non-financial (personal and social) factors are related to work as a source of personal satisfaction, esteem, and respect (Mor-Barak 1995). A study on older employees' motives to seek employment found that the strength of money as a motive for continuing to work differed according to subgroups, and older employees preferred the financial factor less than other age groups in the study (Loi & Shultz 2007).

### **3 PURPOSE OF STUDY**

The purpose of the study was to investigate personal, health, work, and work-related psychological factors as predictors and antecedents of employee early retirement and bridge employment intentions. In addition, the study aimed to investigate age-related differences in employee reward preferences.

The specific aims of this study were to find out:

1. If age-related differences exist among employee preferences in regard to financial and non-financial rewards (Paper I)
2. If personal, health, and work-related psychological factors are associated with early retirement intentions (Paper II)
3. If there are gender-specific differences in the stability of antecedents and predictors of early retirement intentions (Paper III)
4. If personal and work factors are associated with full retirement or bridge employment intentions (Paper IV)

## 4 METHODS

### 4.1 The quantitative study approach

This dissertation has taken a quantitative approach to early retirement and bridge employment intentions and age-related differences in employee reward preferences. The strengths and limitations of this study will be discussed in detail later. Next, the general assumptions of this dissertation will be evaluated in light of the positivistic ideal<sup>1</sup>. Even if there are several different versions of positivism, Bryman (1988) has generated some of the constituents widely identified by various writers in the field.

First, positivism entails a belief that the methods and procedures of natural science can be applied to the social sciences (Bryman 1988). Furthermore, according to the principle of methodological monism or naturalism (von Wright 1971) the objects of the social sciences think, feel, communicate, attribute meaning to their environment, and appear to be uniquely different from one another in terms of their beliefs and personal characteristics (Bryman 1988). Hence, in this dissertation it will be assumed that the methods of positivism can be used to explore individual differences in retirement-related intentions and reward preferences.

Second, positivism entails a belief that only those phenomena which are observable, in the sense of being amenable to the senses, can be regarded as knowledge. Hence, feelings or subjective experiences, such as retirement-related intentions, reward preferences, and employee well-being, can be rendered observable. Third, positivism suggests that scientific knowledge is arrived at through the accumulation of verified facts. Thus, theory reflects the accumulated findings of empirical research and can be referred to as inductivism (Bryman 1988). This dissertation relies on several theoretical

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<sup>1</sup> The use of the term 'positivism' is problematic because of the pejorative tone the attribution entails (Giddens 1974; Cohen 1980). Positivism is used in this dissertation in a neutral sense, even if the term has been used in a negative sense by the opponents of quantitative research (Walsh 1972).

models of retirement and prominent theories on motivation, development across the life-span, and to the meaning of work for older employees, together with accumulated findings on retirement-related intentions and reward preferences.

Fourth, positivists see theories as a source of hypotheses and causal connections, which can be tested by the means of empirical research (Bryman 1988). This implies that science is deductive, and is the assumption adopted in this dissertation through specific aims which will be explored by means of empirical data. Fifth, positivists insist that the researcher must maintain his or her objectivity in order to determine the validity of knowledge. Furthermore, positivists acknowledge that even if they can investigate the implications of a particular normative position, they cannot verify or falsify the position itself (Bryman 1988). It is especially important to strive towards objectivity in delicate social phenomena, such as aging, retirement, and well-being. Therefore, the researcher has to be aware of the underlying assumptions of the study. In this dissertation, it will be assumed that individuals have, to some extent, a desire to retire at a later age. In addition, it will be assumed that there is individual variation between factors that might be related to retirement-related intentions, as well as reward references.

## **4.2 Study design and participants**

This dissertation is based on empirical data from three individual research projects. The age management studies conducted at the School of Business and Economics, University of Jyväskylä, consisted of three separate hospital surveys. Cross-sectional data was collected at the Central Finland Central Hospital and Kuopio University Hospital, located in Northern Savo, in 2004 and 2005 and again from Kuopio University Hospital in 2006 and 2007. The longitudinal study on aging municipal employees (KVTEL 1981-1997) was conducted by the Finnish Institute of Occupational Health between 1981 and 1997. The Merit Principal Survey data was collected by the U.S. Merit Systems Protection Board (MSPB) in the spring of 2000. The Merit Principle Survey is cross-sectional and it concerns U.S. federal government employees and supervisors in all executive branch agencies. The studies are summarized in table 1.

### **4.2.1 The age management studies (Papers I and II)**

The study sample in the first survey consisted of 1 590 full and part-time registered nurses working in Central Finland Central Hospital and the Kuopio University Hospital in 2004 and 2005. The nurses participating in the study were permanently or temporarily employed at the hospitals and they worked full or part-time in the divisions of operative and conservative treatment. These

two divisions were chosen in co-operation with the hospital management and they represented two somewhat similar divisions in terms of patient care. Most of the nurses in these divisions worked in rotating shifts. A systematic sampling conducted among these 1 590 nurses left us with a study sample of 1 320 nurses. Nurses holding a managerial position were excluded from this study. Questionnaires addressed to these nurses were sent out in December 2004 and March 2005. The combined response rate from the two hospitals was 48.9 percent (n=645).

For the purpose of the study in Paper I, which investigated reward preferences among nurses of different ages, a total of 17 questionnaires out of 645 respondents (2.7 %) were rejected, due to missing data. This left us with an effective sample size of 628. The study design allowed the researcher to analyze demographic data (age and gender) and the type of employment of the non-respondents with the help of the  $\chi^2$ -test. No statistically significant differences were detected between respondents and non-respondents in terms of demographic data. This indicated that no systematic bias occurred among nurses participating in the study.

The study sample in the second survey consisted of 937 full or part-time, permanently or temporarily employed registered nurses, including mental and practical nurses working at the Kuopio University Hospital. In all, Kuopio University hospital employed some 2 600 nurses in 2006. Questionnaires addressed to these nurses were sent out in December 2006 and January 2007. The nurses participating in the study worked in the divisions of operative and psychiatric treatment. These two divisions were chosen again in co-operation with the hospital management and they represented two somewhat similar divisions in terms of patient care. Most of the nurses in these divisions worked in rotating shifts. As in the first survey, nurses holding a managerial position were excluded from the study. The response rate of the study was 54.4 percent (n=510). No statistically significant differences were detected between respondents and non-respondents in terms of demographic data (age and gender), type of employment, and current division of care. This meant that no systematic bias occurred among the nurses participating in the study. For the purpose of Paper II, which focused on health-related early retirement intentions among nurses, all 510 respondents were included in the study.

#### **4.2.2 The study on aging municipal employees (KVTEL, Paper III)**

In a study conducted at the Finnish Institute of Occupational Health in 1981, a sample of 7 344 municipal employees born between 1923 and 1935 and living in Finland was drawn upon from the national population registers. This multidisciplinary follow-up study focused on health, work, lifestyle, and retirement among employees in the municipal sector. Participants in the study represented 40 professional groups and people who had been working for more than five years in their current professions. Follow-up data was collected in 1985, 1992 and 1997. In 1981, a total of 6 257 employees answered the

questionnaire (85%), and in 1992, some 4 534 individuals returned the questionnaire. Register-based data is available on the type of retirement the respondents have received between 1981 and 2006. The dates of death were obtained from the Population Register Centre. The design and methodology of these studies have been reported in detail by Ilmarinen et al. (1991), Tuomi et al. (1997), and Seitsamo (2007).

The study reported in Paper III, on the predictors of early retirement intentions among middle-aged and older municipal employees, included data on 1 101 participants. These participants were still working full or part-time and had answered the baseline questionnaire in 1981 and the follow-up in 1992. During the 11-year follow-up period a large number of employees had gone into old-age pension (2 595), disability pension (1 852), or had deceased (395). In addition 314 persons did not respond to the follow-up questionnaire, but were not yet retired. The response rate, calculated from the living subjects was 77.3 percent in 1992. The study flow is illustrated in figure 1.

#### **4.2.3 The Merit Principal Survey (MPS, Paper IV)**

Data for the Merit Principle Survey was collected by the U.S. Merit Systems Protection Board (MSPB) in the spring of 2000. The MSPB survey has been conducted every three or four years since 1989 and concerns U.S. federal government employees and supervisors in all executive branch agencies. The aim of the survey is to offer information on the health of the federal merit system. The Merit Principle Survey 2000 concerned a randomly selected sample of 17 250 full-time permanent civilian employees from the federal workforce of over 1.5 million in executive branch agencies (excluding the U.S. Postal Service and various intelligence agencies). Measures were taken to ensure that all major large agencies were represented in the study. The response rate in the study was 43 percent resulting in 6 958 completed the surveys. The study is described in detail by the U.S. Merit Systems Protection Board (2000) and Brewer (2005).

For the purpose of the study described in Paper IV, which explored early retirement and bridge employment intentions, the focus was on employees aged 40 years and older (5 596 respondents). The age of 40 is the typical cutoff used in most studies examining older workers and retirement (Shultz & Adams 2007). Respondents included in the final study sample all stated that they wanted to retire from their current job within the next five years. The research design did not allow us to study retired federal government employees. Instead, respondents who stated that they wanted to retire within the next five years were asked about the significance of certain factors that made them consider either full retirement or changing jobs within or outside the federal agencies in the next year. This narrowed the number of respondents further to 539. The sample was substantially smaller than the group that had planned to retire within the next five years, but it was believed to give a more accurate picture of the factors related to their retirement intentions.



TABLE 1 Summary on study designs, populations and outcomes

Paper	Study	Design	Population	Age (mean $\pm$ SD) or Age groups	Outcomes
I	The age management studies	Cross-sectional	645 public sector nurses Women n=606 Men n=39	23-59 (41.0 $\pm$ 9.5)	Age-related differences in reward preferences
II	The age management studies	Cross-sectional	510 public sector nurses Women n=423 Men n=87	21-62 (41.5 $\pm$ 9.7)	Early retirement intentions
III	The study on aging municipal employees	Longitudinal, 11-year follow-up	1011 municipal employees Women n=669 Men n=432	44-56 (47.1 $\pm$ 1.9)‡	Early retirement intentions
IV	Merit Principle Survey 2000	Cross-sectional	539 U.S. federal government employees Women n=183 Men n=355 (sys miss n=1)	40-49 years n=71 (13.2%) 50-54 years n=240 (37.8%) 55-59 years n=155 (28.8%) 60-64 years n=84 (15.6%) 64+ years n=25 (4.6%)	Full retirement and bridge employment intentions

SD= Standard deviation

‡ Measured at baseline in 1981

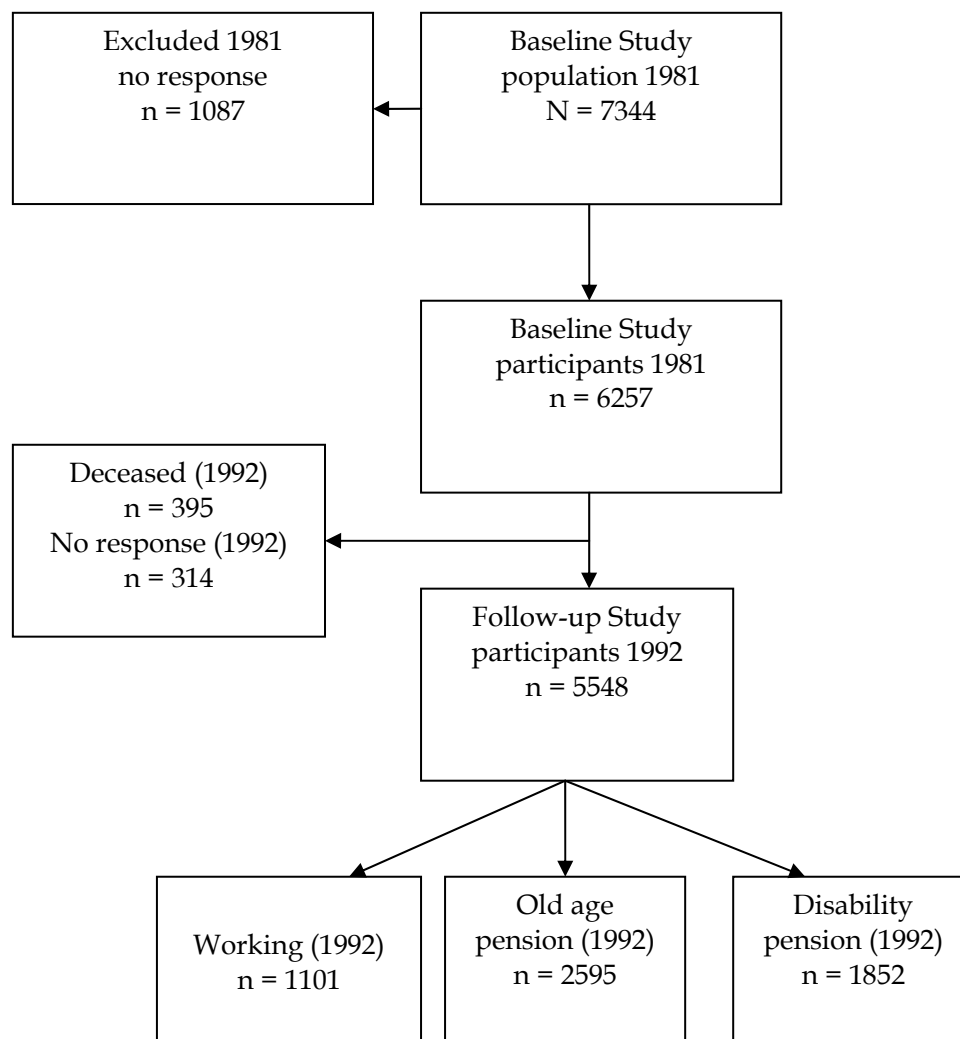


FIGURE 1 The study flow from the study on aging municipal employees in Paper III

### 4.3 Ethics

The age management studies have been approved by the Ethical Committee of the Central Finland Health Care District and the Ethical Committee of Kuopio University Hospital. The studies have been conducted according to the good scientific and clinical practice laid down by the Declaration of Helsinki. All data was recorded blind, handled, and registered according to the Finnish Personal Data Act. A license has been granted to the study of aging municipal employees by the Population Register Center for obtaining data from the disability and mortality registers. The Merit Principle Survey is conducted by an independent, bipartisan federal agency, Merit Systems Protection Board, and the results are reported to the president, congress, federal managers, and other decision makers in the United States. Participation in the study is voluntary and all responses in the survey were strictly confidential.

All data in the individual studies of this dissertation have been reported in such a manner that no single individual can be identified from the findings.

#### **4.4 Study variables**

In the text the Roman numerals I-IV indicate the Paper in which each variable has been used. The outcome variables were early retirement intentions (Papers II, III), bridge employment intentions (Paper IV), and reward preferences (Paper I). In the following several personal, health, work, and work-related psychological antecedents and predictors of early retirement and bridge employment intentions will be described. The rationale for selecting these particular measures has been provided in the previous chapters.

Demographic and socioeconomic information was collected in all studies at the baseline and during the follow-up in the study on aging municipal employees. Demographic information included respondents' age (Papers I, II, III) or the age group they belonged to (Paper IV), gender (Papers I, II, III, IV), marital status (Papers II, III), spouses work activity (Paper III), the number of dependents (Paper II), minority status (Paper IV), and education (Papers I, II, IV). Socioeconomic data gathered in the present studies consisted of pay or pay grade (Papers I, II, IV), financial situation of the household (Paper III), future retirement income (Paper III), retirement eligibility (Paper IV), and current retirement system (IV).

##### **4.4.1 Early retirement and bridge employment intentions**

To date there is no universal measure of early retirement intentions due to the differences in national retirement policies. The measures of early retirement intentions in this dissertation are based on measurements frequently used in Finnish studies on employee health, working conditions, and early retirement intentions (Forma, Tuominen & Väänänen-Tomppo 2006; Harkonmäki 2007).

In Paper II, self-reported information on employee health-related early retirement intentions was collected by asking the nurses if their health allowed them to continue working until their old-age pension age at 63 years. The answer alternatives were 1) yes, 2) perhaps, and 3) no. The focus of this study was on nurses who had a strong opinion on the subject, as they could then serve as better proxies for people facing early retirement. Hence, respondents stating a clear intention to either continue work or to retire early were included in this study (categories 1 and 3), even if this meant losing a significant number of respondents.

In Paper III, based on the study on aging municipal employees, early retirement intentions were measured in 1992 with the question "Have you ever considered retiring before your full retirement age?" The responses were classified into two categories: 1) Those who were not thinking of retiring

(alternative "No, I have not considered retiring before full retirement age") and 2) Those who had seriously considered early retirement (alternatives "I have sometimes considered retirement before full retirement age", "I think about retirement constantly" and "I have already applied for retirement"). Early retirement intentions in Papers II and III are presented in table 2.

In Paper IV, based on the Merit Principle Survey 2000, employees were asked whether or not they intended to retire from the U.S. federal government. In addition, the respondents were asked within the next five years if they intended to continue working either inside or outside of the government. For the purpose of the study the respondents were categorized into three groups (Wang et al. 2008; Gobeski & Beehr 2009). Employees wanting to retire (i.e., responding with either very likely or somewhat likely) and not considering continuing to work either inside or outside the government were classified as those considering *full retirement* (n = 189). Employees were also asked if they had considered leaving their work units for another job inside or outside the federal government. The respondents who indicated that they wanted to both retire and continue working inside the government in another unit were classified as the ones considering *career bridge employment* (n = 75). Further analysis on this group revealed that employees wanted to work in other work units or in another agency. Employees considering to continuing work outside of the federal agencies were classified as those considering *bridge employment in a different field* (n = 175).

TABLE 2 Early retirement intentions (n, %), Papers II and III

Item	Yes		Maybe/missing		No		Total
	n	%	n	%	n	%	n
Do you feel that your health will allow you to work until the age of 63 years? (II)	141	27.6	238	46.8	131	25.7	510
Have you considered retiring before your full retirement age? (III)	783	71.1	34	3.1	284	25.8	1101

The categorization of each early retirement intention measure was based on the demographics of the data and on previous studies. The age management studies (Paper II) concerned nurses of all ages. Further analysis revealed that respondents who were uncertain about their early retirement intentions were statistically significantly younger compared to those who either felt that they would or would not be able to continue working. Therefore, respondents who were not sure about their early retirement intentions were excluded from the study. In the study on aging municipal employees (Paper III), the respondents' mean age in 1992 was 58.4 years (SD = 1.9) Since the respondents were significantly older than in the age management studies, it was decided to include all respondents in the analysis regarding early retirement intentions.

#### 4.4.2 Reward preferences

Employee reward preferences (Paper I) were assessed using a scale consisting of seven items. This scale was derived from classical motivation theories (Maslow 1954; Herzberg, Mausner & Snyderman 1959). The underlying hypothesis in the study in Paper I, as in corresponding ones (Stajkovic & Luthans 2003; Chiang & Birch 2007), was that the reward preferences could be divided into financial and non-financial elements (Schuler & Jackson 1996; Armstrong 1999). The scale was modified to fit the reward practices of public health care, especially in terms of financial reward preferences<sup>1</sup>. Nurses were asked to answer questions regarding their reward preferences. Responses to these questions could vary from 1) "I prefer very little" to 5) "I prefer very much". The individual reward preference items that the nurses had to rate included 1) "The recognition I receive in my job from my supervisor", 2) "The pay I receive", 3) "The opportunity to use my skills diversely in my job", 4) "The pay increments I receive<sup>2</sup>", 5) "Job security", 6) "The raise I receive in case I am promoted", and 7) "Flexible working hours".

#### 4.4.3 Personal and health variables

According to several previous studies, personal factors, such as the number of dependents (Talaga & Beehr 1995), marital status, and spouses work activity (Talaga & Beehr 1995; Henkens & van Solinge 2002; Pienta 2003; Beehr & Bennett 2007; Shultz & Adams 2007) can be related to early retirement intentions. In addition to this information, employees were asked about their perception of their age (Paper II). Self-perceived physical age was measured on the basis of a single question, in which participants were asked if they felt physically 1) younger, 2) the same age, or 3) older than other people of their age (Uotinen, Suutama & Ruoppila 2003). In Paper III, respondents general life satisfaction was measured with a single item question on a scale of 1) "very satisfied" to 5) "very dissatisfied".

Health variables have typically been associated with early retirement (Beehr 1986; Talaga & Beehr 1995; Taylor & Shore 1995; Adams & Beehr 1998; Shultz, Morton & Weckerle 1998; Elovainio et al. 2005; Shultz & Wang 2007) and with bridge employment (Kim & Feldman 2000; Wang et al. 2008). Several health variables were included in the present studies. Self perceived health was measured with the help of questions taken from the Work Ability Index, WAI (Tuomi et al. 2002). The index has been thoroughly validated and it has been widely used to measure employee physical and mental ability to perform in

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<sup>1</sup> In the fall of 2004, the way in which salaries of local authority workers were determined changed drastically. Due to these changes employees' salaries now consist of two independent parts: One part is based on the difficulty of the job and the other on personal factors (Commission for Local Authority Employers 2005).

<sup>2</sup> Pay increments refers to the part of pay which is composed of personal factors (8-22%). This comprises work experience, individual competence, and work performance (Commission for Local Authority Employers 2005).

their work. In Paper II, three items from the WAI were used, which concerned employee 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 (Cronbach Alpha 0.824). Perceived health was measured (Paper III) by asking the respondents to compare their health with that of others of the same age. The alternatives varied between 1) “significantly better” and 5) “significantly poorer” when compared to others of the same age.

#### **4.4.4 Work variables**

Work strain has a significant influence on employee well-being and retirement decisions (Beehr 1986; Elovainio et al. 2005; Gobeski & Beehr 2009). Physically demanding work, such as shift work can have an effect on employee early retirement in terms of disability retirement (Karpansalo et al. 2002; Blekesaune & Solem 2005). It is therefore important to control for type of work in early retirement studies. In Paper III, type of work (physical, mental, and mixed physical and mental work) was controlled for. Type of work was first defined by classifying the 133 different occupational titles included in this study into 13 occupational groups based on observations at the workplace and on ergonomic job analysis (Arbeitswissenschaftliche Erhebungsverfahren zur Tätigkeitsanalyse, AET, Rohmert & Landau 1983). Second, three different categories were formed, according to the physical and mental demands of the occupation (Ilmarinen et al. 1991). Physical work included, among others, auxiliary work, installation work, and domestic aid work. Mixed physical and mental work included transport work, dumping ground work, kitchen supervisor work, dental care work, and nursing work. Mental work covered administrative and office work, technical supervision, physician’s work, and teaching work. In Papers I and II, all respondents worked in health care professions. Instead of type of work, respondents were asked if they were working during the day or in rotating shifts. In the age management studies, in Papers I and II, type of employment (temporary or permanent work) and division of care were controlled for. In addition, respondents were asked about their work experience in their current job (I, II) or under their current employer (IV).

#### **4.4.5 Work-related psychological variables**

Previous studies concerning early retirement and bridge employment intentions and their antecedents and predictors have concentrated on personal factors and have largely ignored organizational (Weckerle & Shultz 1999) and job-related psychological variables (Wang et al. 2008). Studies on early retirement have consistently shown that personal factors and environmental forces are associated with employee retirement intentions and decisions (Beehr 1986; Taylor & Shore 1995; Adams & Beehr 1998), yet longitudinal research on work-related psychological factors has emerged only recently (Elovainio et al.

2005; Wang et al. 2008). In Papers II and III, several work-related psychological factors have been controlled for.

In Paper II, nurses' opportunities for job control was measured using an eight item scale (Cronbach Alpha 0.825), partly based on Karasek's Job demand - Control model (Lehto 1996). The nurses were asked about their opportunities to determine their working methods, work pace, working hours, etc. In Paper III, negative perceptions about work were measured using a scale comprising three questions concerning the frequency of employees' feelings of reluctance towards leaving for work, staying at work, and their general feeling of apathy (Cronbach Alpha in 1981 0.74 and in 1992, 0.82). The answers ranged between 1) "Not at all" and 5) "Constantly". Work satisfaction among the respondents was measured using a single item question on a scale of 1) "very satisfied" to 5) "very dissatisfied" in Paper III.

In Paper III, respondents' estimation of their work ability was assessed using a single-item question from the Work Ability Index (Tuomi et al. 2002). The respondents were asked to estimate their current work ability compared to their lifetime best. The scale varied from 0 to 10, with 10 indicating work ability at its best. Studies have found that this single-item question concerning employee estimations of their work ability is highly correlated with the entire Work Ability Index, and thus constitutes a reliable measure of self-rated work ability (Ilmarinen & Tuomi 2004; Gould et al. 2008).

In Paper II, reward satisfaction was measured according to a seventeen item scale based on the Pay Satisfaction Questionnaire created by H. G. Heneman and Schwab (1985) and further developed by R. L. Heneman, Greenberger and Fox (2002). The scale was modified to consist of four different elements: pay satisfaction, pay rises, pay administration and structure, as well as non-financial rewards. Questions, such as: "how satisfied are you with your net salary, the way your salary is developing, your pay rises, your chances of influencing pay rises, the recognition you receive from your supervisor, and the consistency in which wages are determined in your organization", were asked. A sum variable was formed, first for each of the four elements concerning reward satisfaction, and then for overall reward satisfaction (Cronbach Alpha 0.780).

## 4.5 Statistical methods

The age management studies and the Merit Principle Survey 2000 were cross-sectional studies, whereas in the study on aging municipal employees, both longitudinal and cross-sectional data were gathered.

### *Structural equation modeling*

Confirmatory factor analysis was performed on the reward preference items (Paper I), in order to assess whether or not there were different latent structures

for employee reward preferences. Since the normality assumption did not hold (Jöreskog 2005), the variables were treated as ordinal in PRELIS (Jöreskog & Sörbom 1993). This in turn meant using polychoric correlations and their asymptotic covariance matrix as the basis for further statistical procedures. WLS (Weighted Least Squares) was used as the estimation method, due to the substantial sample size. The confirmatory factor analysis was performed using LISREL 8.72.

*Logistic regression analysis and multinomial logistic regression analysis*

Logistic regression analysis was used to calculate the odds ratios (OR) along with their 95% confidence intervals (CI) for covariates associated with employee early retirement intentions (Papers II and III). The outcome in the analysis was employee early retirement intentions, which were classified into two categories; those who had no early retirement intentions and the ones who had early retirement intentions. The modeling was performed using SPSS (14.0 and 15.0) software.

In Paper IV, multinomial logistic regression analysis was performed to test the antecedents of retirement and bridge employment intentions. Three separate comparisons were made among different bridge employment intentions: "bridge employment in a different field" against "full retirement", "career bridge employment" against "full retirement" and "career bridge employment" against "bridge employment in a different field". The categories of full retirement and bridge employment in a different field were set to be reference groups in the regressions in order to compare all the bridge employment intentions with each other. The modeling was performed using SPSS (14.0) software.



## 5 RESULTS

In this results section, data used in the studies of this dissertation will first be described. Second, the main results of the Papers I-IV will be revisited - a more detailed description of the results can be found in the independent Papers I-IV. The implications of these results will then be discussed in detail in later chapters.

### 5.1 Sample characteristics

The characteristics of the participants in the age management studies are summarized in table 3. In light of their background characteristics, the respondents in both of the studies were relatively similar. The percentage of male respondents was higher in the 2006-2007 Kuopio University Hospital study compared to the combined 2004-2005 Central Finland Central Hospital and Kuopio University Hospital study. Still, the majority of the respondents in both studies were female. Otherwise, nurses in both studies were similar in terms of education, number of children, type of employment, and working time. The amount of pay nurses received was unfortunately not possible to report in the combined 2004-2005 Central Finland Central Hospital and Kuopio University Hospital study due to measurement related issues, which did not allow combining data gathered from the two hospitals.

The baseline characteristics of either employment or retirement status in 1992 for the participants in the study on aging municipal employees are presented in Paper III. In addition to employed or retired employees, 395 respondents had died during the 11-year follow-up while 314 did not answer the questionnaire in 1992, but had not yet retired. In Paper III, the regression analysis was performed on the 1 101 individuals still working in 1992.

TABLE 3 Characteristics of participants in the age management studies

	Central Finland Central Hospital and Kuopio University Hospital 2004-2005 (n=628) Paper I	Kuopio University Hospital 2006-2007 (n=510) Paper II
Age, mean $\pm$ SD	41.0 $\pm$ 9.5	41.5 $\pm$ 9.7
Gender, % (n)		
Women	93.8 (589)	82.9 (423)
Men	6.2 (39)	17.1 (87)
Education, % (n)		
College level registered nurse education	78.0 (489)	70.2 (346)
Bachelors degree in nursing	22.0 (138)	29.8 (147)
Number of children, % (n)		
No children	20.2 (110)	28.5 (145)
One or more children	79.8 (435)	71.5 (364)
Type of employment, % (n)		
Permanent	73.9 (464)	75.3 (384)
Temporary	26.1 (164)	24.7 (126)
Working time, % (n)		
Day work	22.2 (139)	26.2 (133)
Shift work	77.8 (487)	73.8 (375)
Division of care, % (n)		
Conservative	42.4 (266)	-
Operative	57.6 (362)	71.2 (363)
Psychiatric	-	28.8 (147)
Pay €/month, mean $\pm$ SD	-	2145 $\pm$ 332
Work experience in current workplace, years, mean $\pm$ SD	11.8 $\pm$ 8.8	14.4 $\pm$ 9.6

Statistically significant differences were detected according to employment status in the baseline for all variables in 1992. Respondents who were still working in 1992 were younger and typically employed in mentally demanding work compared to all respondents in the baseline. Nearly 54 percent of the respondents who had retired due to disability had been employed in physically demanding work. The majority of the respondents still working in 1992 were women (60.8%). Gender differences were detected in type of work among these respondents, since more than 40 percent of the men and nearly 30 percent of the women were employed in physically demanding work.

In 1992, out of the 1 101 respondents still working, some 783 (73.4%) stated that they had early retirement intentions. Early retirement intentions were common among both women (69.5%) and men (79.6%). A closer examination showed that in 1981 the mean age for employees with early retirement intentions was 46.9 years (SD = 1.8) and for employees with no early retirement intentions 47.4 years (SD = 2.0). Early retirement intentions varied little according to type of work. Nearly 78 percent of the respondents working in

physically demanding and 76.6 percent working in mentally demanding jobs stated that they had early retirement intentions.

Means and standard deviations in the demographic and Likert-scaled variables in the Merit Principle Survey 2000 are presented according to retirement and bridge employment intention groups in Paper IV. The age of the respondents is presented in groups due to the nature of the item in the survey questionnaire. In Paper IV, educational background of the respondents was classified according to three groups (high school level education or less, college level education or some graduate school, graduate or professional degree). Employees considering full retirement were the oldest, whereas those intending to engage in career bridge employment were the youngest. Individuals considering bridge employment in a different field held a higher level of education compared to those considering career bridge employment. Further, a closer look at the Likert-scale variables revealed that non-work interests were the strongest reason for full retirement and the opportunity to make better use of ones skills for both bridge employment in a different field and career bridge employment.

## **5.2 Age-related differences in reward preferences (Paper I)**

A confirmatory factor model for nurses' reward preferences was formed from the existing reward preference items. Reward items loaded on two latent factors, which could be called financial and non-financial reward preferences. Statistical measures indicated a reasonably good fit for the model ( $\chi^2 = 39.991$ ,  $df = 13$ ,  $p < 0.001$ ,  $RMSEA = 0.057$ ,  $p = 0.245$ ,  $NFI = 0.938$ ,  $SRMR = 0.084$ , standardized solution).

The results of the confirmatory factor analysis showed that three out of seven reward preference items loaded highly on the financial reward preference factor (pay, pay increments, and pay rises), whereas the four items which loaded highly on the second factor appeared to reflect non-financial reward preferences (recognition from supervisor, opportunity to use skills diversely, job security, and flexible working hours). Factor loadings for financial and non-financial preferences are shown in figure 2. The correlation between these two factors was 0.67, which indicated a connection between them.

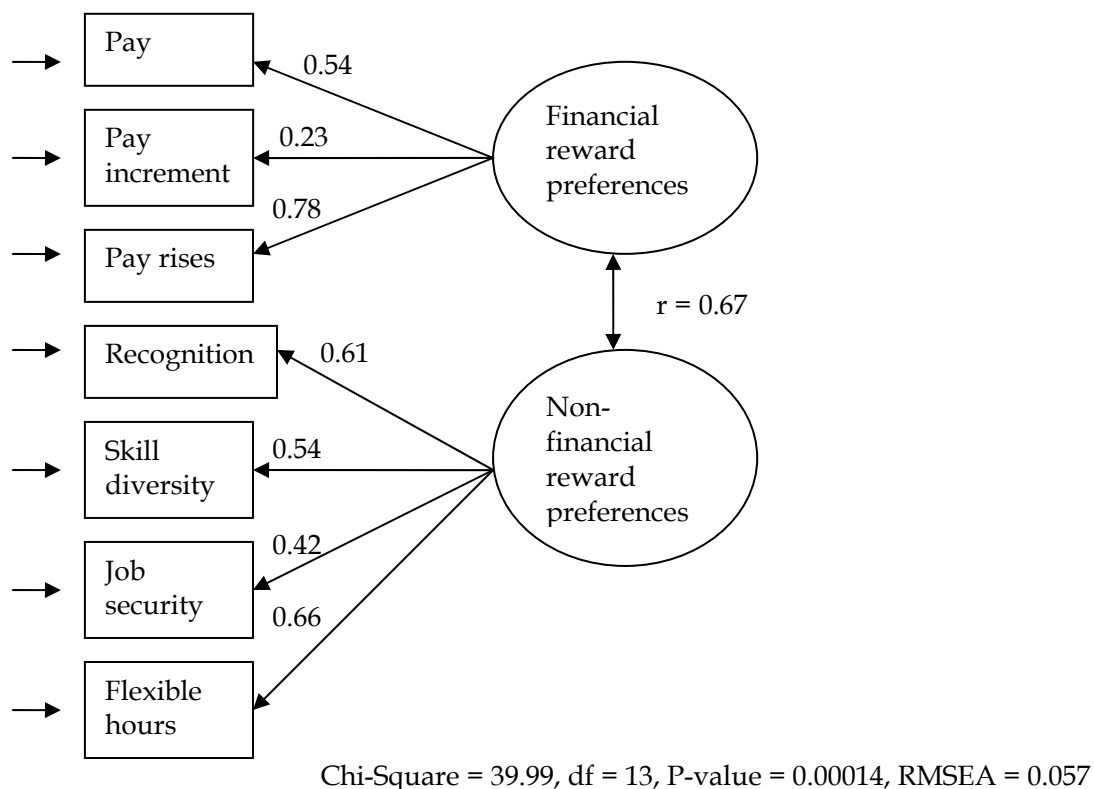


FIGURE 2 Estimation results for the confirmatory two-factor model of financial and non-financial reward preferences

After establishing the multidimensionality of the reward preferences held by the nurses, factor score scales for financial and non-financial reward preferences were computed for each individual. The reliability of the financial and non-financial reward preference factor score scales were relatively high, 0.870 (Cronbach alpha 0.714) and 0.823 (Cronbach alpha 0.652) respectively. In order to explore the possible age-related differences in factor score scales for the nurses' financial and non-financial reward preferences, the Kruskal-Wallis non-parametric group comparison test was performed on both factor score scales according to the four age groups. The analysis showed that there were statistically significant differences in financial reward preferences among the four age groups ( $\chi^2 = 15.70$ ,  $df = 3$ ,  $p < 0.001$ ). Mean rank comparisons revealed that the preference for financial rewards grew steadily as nurses aged. In other words, the youngest nurses aged 20-29 years had significantly weaker financial preferences, when compared to the other age groups. The strongest preference for financial rewards was found in the oldest age group. Age-related differences in the non-financial reward preferences factor score scale turned out to be statistically non-significant ( $\chi^2 = 4.68$ ,  $df = 3$ ,  $p < 0.197$ ).

In addition, a thorough statistical analysis, which regarded the effect other demographic and work variables might have, was also performed. As the normality assumption was not met in the study, the Mann-Whitney U-test was used to analyze differences according to gender, marital status, education, type

of employment, and the division of care they were working in. Furthermore, the Kruskal-Wallis Test was used to establish whether or not the factor score scales for financial and non-financial reward preferences differed according to the nurses' work experience. Gender had an effect on the nurses' non-financial reward preferences. Male nurses had a significantly weaker preference for non-financial rewards compared to females ( $z = -5.76, p < 0.001$ ). However, when interpreting the results, the small number of men (6.2% of all respondents) participating in this study has to be taken into consideration. Statistical differences were detected between the factor score scale for the financial reward preference factor score scale and the type of employment ( $z = -2.82, p < 0.005$ ). Analysis showed that nurses in temporarily positions had a weaker preference for financial rewards when compared to those in permanent positions. As noted earlier, the majority (78.4%) of the nurses in temporary positions were less than 40 years old, which could have had an effect on the result.

### **5.3 Antecedents and predictors of early retirement intentions (Papers II and III)**

Early retirement intentions were the focus of this study. More specifically, personal, health, work, and work-related psychological antecedents and predictors of these intentions were explored. In addition, early retirement intentions in terms of gender-differences and gendered lives were of interest. Data for the study in Paper II was gathered from the health care sector, which typically is a female-dominated field. In Paper III, separate models on antecedents and predictors of early retirement intentions for women and men were formed. This allowed exploring gender-differences in the retirement intentions of middle-aged and older municipal employees.

#### **5.3.1 Health-related early retirement intentions among nurses (Paper II)**

A logistic regression model on the relationship between early retirement intentions and reward satisfaction among nurses is presented as a result of this study. Self-perceived health was entered in the original regression, but then excluded from the second regression. This was done to get a better idea of the role that other factors besides self-perceived health played in the models, as self-perceived health significantly increased the odds ratio of early retirement intentions. The outcome factor, early retirement intentions, was health-related. Demographic measures (age, gender, and number of children), working time, self-perceived physical age in relation to others in the same age group, job control, and reward satisfaction were included.

Several demographic variables were included in the model (table 4). The final model only contains statistically significant variables. Non-significant variables, such as type of employment, marital status, work experience,

professional education, number of dependents in the household, and pay level were excluded. In the first phase, in addition to demographic variables, self-perceived health, self-perceived physical age in relation to others in the same age group, job control, and reward satisfaction variables to the logistic regression analysis were added to the model.

Several variables were clearly associated with the health-related early retirement intentions of nurses. The predictive power of the variables is indicated in terms of multivariate odds ratios and 95% confidence intervals. Age turned out to be statistically non-significant in terms of increasing the likelihood of early retirement intentions, whereas gender proved to be significant. Some 207 out of the 252 nurses were female, which left us with only 45 men in the model. Compared to men, women were nearly three times as likely to have early retirement intentions. The number of children was also connected to early retirement intentions, which indicated that having children increased the odds ratio of early retirement intentions [OR = 0.29, 95% CI = (0.12-0.67)]. Nurses working in shifts were more than five times more likely to have early retirement intentions than daytime workers.

Self-perceived physical age in relation to others in the same age group and poor self-perceived health both proved to be related to early retirement intentions. Perceiving oneself to be physically the same age as others or older than them increased the odds ratio of early retirement [OR = 3.58, 95% CI = (1.76-7.27)]. As far as self-perceived health was concerned, moving one category further towards perceiving one's health to be better decreased the likelihood of early retirement intentions more than tenfold. Reward satisfaction on a scale from one to five had a similar effect [OR = 0.53, 95% CI = (0.30-0.93)]. In a logistic regression analysis no actual percentage of the variance a model accounts for is reported, although some approximation measures are widely used. In this model R-squared estimates were 0.62 (Nagelkerke  $R^2 = 0.624$ ).

Next, a similar model to the previous one was formed (see table 4); however, self-perceived health was excluded. The results showed that health had a significant impact on retirement: it caused all other variables in the model, except having children, to become more significant. In terms of age, this meant that moving from a younger age group to an older one increased the chances of early retirement intentions by one and a half. Low job control was also found to increase the odds ratio of having early retirement intentions [OR = 0.49, 95% CI = (0.27-0.88)]. Excluding self-perceived health appeared to enhance the significance of reward dissatisfaction with regard to early retirement intentions.

TABLE 4 Two logistic regression models on health-related early retirement intentions

Indicator	Model 1 including all variables		Model 2 excluding self-perceived health	
	OR	(95% CI)	OR	(95% CI)
Age	0.48	(0.57-1.31)	<b>1.58**</b>	(1.14-2.18)
Gender (Categorical)	<b>2.83*</b>	(1.08-7.42)	<b>5.07***</b>	(2.10-12.24)
Number of children (Categorical)	<b>0.29**</b>	(0.12-0.67)	<b>0.41*</b>	(0.21-0.81)
Shift work	<b>0.19***</b>	(0.08-0.48)	<b>0.18***</b>	(0.08-0.38)
Relative physical age	<b>3.58***</b>	(1.76-7.27)	<b>4.80***</b>	(2.68-8.59)
Self-perceived health	<b>0.10***</b>	(0.05-0.20)	-	
Job control	0.53	(0.26-1.09)	<b>0.49*</b>	(0.27-0.88)
Reward satisfaction	<b>0.53*</b>	(0.30-0.93)	<b>0.41***</b>	(0.25- 0.67)
Chi-square	$\chi^2 (8) = 158.834^{***}$		$\chi^2 (7) = 91.333^{***}$	
Cox and Snell R <sup>2</sup>	0.468		0.303	
Nagelkerke R <sup>2</sup>	0.624		0.404	

*Note.* At entry n = 252, OR = Odds Ratio, CI = confidence interval.

The Confidence Intervals in table 3 (Paper II) have been corrected and are reported in this table.

### 5.3.2 The stability of gender specific predictors of early retirement intentions among middle-aged and older municipal employees (Paper III)

The results of the logistic regression analyses for early retirement intentions are presented in table 5 (longitudinal models 1 and 3, cross-sectional 2 and 4). Age, type of work, and spouses work activity predicted employee early retirement intentions. Older age proved to decrease early retirement intentions for women in the first model and for men both in the third and fourth model. Mentally and physically demanding work decreased the odds ratio of early retirement intentions compared to mental work in all models. In addition, in the fourth model, physically demanding work decreased early retirement intentions for men when compared to mental work. Spouses work activity predicted the early retirement intentions of women in models 1 and 2 in that having no spouse decreased the odds of early retirement intentions compared to women whose spouses were still working.

For women, in the first model, and adjusted with age, type of work, and spouses work activity, negative perceptions about work increased the odds ratio of early retirement intentions [OR = 1.25, 95% CI = (1.09-1.45)]. In the second model, adjusted with age, type of work, and spouses work activity, good self-rated work ability decreased the odds ratio of early retirement intentions [OR = 0.82, 95% CI = (0.69-0.97)]. Furthermore, low work satisfaction and negative perceptions about work increased the odds ratio of early retirement intentions 1.61 [95% CI = (1.16-2.23)] and 1.64 [95% CI = (1.41-1.91)]

times, respectively. Low general satisfaction with life decreased the odds ratio for early retirement intentions [OR = 0.69, 95% CI = (0.49-0.97)].

For men, in the third model adjusted with age, type of work, and spouses work activity, good self-rated work ability predicted early retirement intentions [OR = 0.73, 95% CI = (0.56-0.96)]. Furthermore, the odds ratio for early retirement intentions among employees with perceived poor health was 1.59 [95% CI = (1.07-2.37)]. In addition, negative perceptions about work increased the odds ratio of early retirement intentions 1.26-fold [95% CI = (1.02-1.56)]. In the fourth model, adjusted with age, type of work, and spouses work activity, good self-rated work ability decreased the odds ratio of early retirement intentions 0.75-fold [OR = 0.75, 95% CI = (0.58-0.96)]. As in the third model, the odds ratio for early retirement intentions among employees with perceived poor health was higher [OR = 1.88, 95% CI = (1.26-2.79)]. In addition, negative perceptions about work increased the odds ratio of early retirement intentions 1.63-fold [95% CI = (1.32-2.01)].

In order to determine the stability of the predictors of early retirement intentions from the baseline to the follow-up, a correlation analysis (Pearson correlation) was performed on the continuous variables. The results for both women and men indicated that self-rated work ability, perceived health, job satisfaction, negative perceptions about work, and general life satisfaction, measured at the baseline and the follow-up, were correlated. For women, the correlations ranged between (Pearson correlation coefficient)  $r^2 = 0.313$ , ( $p < .01$ ) and  $r^2 = 0.385$  ( $p < .01$ ), and for men  $r^2 = 0.315$  ( $p < .01$ ) and  $r^2 = 0.475$  ( $p < .01$ ).



TABLE 5 Logistic regression models for early retirement intentions as the reference group

	Women				Men			
	<u>Model 1†</u>		<u>Model 2‡</u>		<u>Model 3†</u>		<u>Model 4‡</u>	
	OR (95% CI)		OR (95% CI)		OR (95% CI)		OR (95% CI)	
Age§	<b>0.87**</b>	(0.79-0.96)	0.95	(0.86-1.06)	<b>0.74***</b>	(0.64-0.87)	<b>0.75**</b>	(0.63-0.88)
Type of work§								
Mixed physical and mental work <sup>i</sup>	<b>0.56**</b>	(0.36-0.86)	0.45**	(0.28-0.73)	<b>0.17***</b>	(0.08-0.36)	<b>0.11***</b>	(0.05-0.26)
Physically demanding work <sup>i</sup>	1.03	(0.65-1.64)	0.78	(0.47-1.30)	0.55	(0.28-1.04)	<b>0.36**</b>	(0.18-0.74)
Spouses work activity§								
Spouse not working <sup>Δ</sup>	1.62	(0.78-3.35)	1.46	(0.65-3.31)	0.53	(0.27-1.07)	0.63	(0.29-1.36)
No spouse <sup>Δ</sup>	<b>0.62*</b>	(0.42-0.92)	<b>0.64*</b>	(0.41-0.99)	0.71	(0.25-2.05)	0.85	(0.30-2.71)
Self-rated work ability	0.88	(0.75-1.04)	<b>0.82*</b>	(0.69-0.97)	<b>0.73*</b>	(0.56-0.96)	<b>0.75*</b>	(0.58-0.96)
Perceived health	1.10	(0.84-1.43)	1.28	(0.96-1.70)	<b>1.59*</b>	(1.07-2.37)	<b>1.88**</b>	(1.26-2.79)
Work satisfaction	1.03	(0.79-1.35)	<b>1.61**</b>	(1.16-2.23)	1.04	(0.69-1.57)	1.00	(0.63-1.59)
Negative perceptions about work	<b>1.25**</b>	(1.09-1.45)	<b>1.64***</b>	(1.41-1.91)	<b>1.26*</b>	(1.02-1.56)	<b>1.63***</b>	(1.32-2.01)
General life satisfaction	0.85	(0.63-1.15)	<b>0.69*</b>	(0.49-0.97)	0.81	(0.52-1.26)	0.83	(0.50-1.36)
Chi-square	$\chi^2 (10) = 52.852^{***}$		$\chi^2 (10) = 195.968^{***}$		$\chi^2 (10) = 56.728^{***}$		$\chi^2 (10) = 114.356^{***}$	
Cox and Snell R <sup>2</sup>	0.084		0.267		0.134		0.249	
Nagelkerke R <sup>2</sup>	0.118		0.376		0.210		0.389	

† Model 1 and 3=longitudinal model, independent variables measured in 1981, dependent variable measured in 1992

‡ Model 2 and 4=cross-sectional model, all variables, excluding age, type of work, and spouses work activity measured in 1992

§ Measured in 1981

<sup>i</sup> Mentally demanding work set as reference group

<sup>Δ</sup> Spouse working set as reference group

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

## 5.4 Antecedents of retirement and bridge employment intentions (Paper IV)

In order to explore personal and work antecedents of the retirement and bridge employment intentions of U.S. federal government employees, a multinomial logistic regression was performed (Paper IV). Results of the three different comparisons are presented in table 6.

TABLE 6 Multinomial logistic regression models for retirement and bridge employment intentions

<i>Variables</i>	Bridge employment in a different field vs. Full retirement		Career bridge employment vs. Full retirement		Career bridge employment vs. Bridge employment in a different field	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Age	<b>0.77*</b>	(0.60 – 0.98)	<b>0.49***</b>	(0.35 – 0.70)	<b>0.65*</b>	(0.46 – 0.91)
Gender (male)	<b>2.47**</b>	(1.42 – 4.29)	0.73	(0.38 – 1.43)	<b>0.30***</b>	(0.16 – 0.57)
Education	<b>1.54**</b>	(1.10 – 1.65)	1.16	(0.73 – 1.83)	0.75	(0.48 – 1.16)
Non-work interests	0.97	(0.81 – 1.17)	<b>0.62***</b>	(0.49 – 0.78)	<b>0.64***</b>	(0.51 – 0.80)
Good job market	<b>1.72***</b>	(1.32 – 2.23)	1.32	(0.95 – 1.83)	0.77	(0.57 – 1.05)
Better use of skills	<b>1.34**</b>	(1.10 – 1.65)	<b>1.65**</b>	(1.12 – 2.26)	1.23	(0.90 – 1.69)
Earning more money	1.22	(0.97 – 1.53)	<b>1.47*</b>	(1.08 – 1.99)	1.21	(0.90 – 1.62)
Change in benefits	<b>0.69**</b>	(0.55 – 0.87)	0.76	(0.57 – 1.00)	1.09	(0.84 – 1.41)
Chi-square	$\chi^2 (16) = 191.346^{***}$					
Cox and Snell R <sup>2</sup>	0.361					
Nagelkerke R <sup>2</sup>	0.414					

Note. At entry n = 539, OR = Odds Ratio, CI = Confidence Interval, \* p<.05, \*\*p<.01, \*\*\*p<.001

### *Bridge employment in a different field vs. full retirement*

The results of the first comparison showed that age, gender, level of education, a good job market, the desire to make better use of skills, and concerns about changes in pension benefits were significantly related to employees wanting to engage in bridge employment in a different field instead of full retirement. Age was negatively related to wanting to engage in bridge employment in a different field [OR = 0.77, 95% CI = (0.60-0.98)]. This indicated that belonging to an older age group made it more likely for the employee to seek full retirement instead of wanting to engage in bridge employment in a different field than those belonging to the next youngest age group. Other demographic factors, besides age, were related to employee bridge employment intentions as well. Compared to women, male employees were 2.47 times more likely to want to engage in bridge employment in a different field instead of full retirement [OR

= 2.47, 95% CI = (1.42-4.29)]. In addition, employees belonging to a group with a higher level of education were 1.54 times more likely to want to engage in bridge employment in a different field instead of full retirement [OR = 1.54, 95% CI = (1.10-1.65)] compared to employees belonging to the group with the next lowest level of education.

Non-work interests among employees were not significantly related to the probability of full retirement instead of bridge employment in a different field. Nevertheless, several work-related factors proved to be significant in terms of employee bridge employment intentions. For example, perceiving the job market to be good (vs. bad) increased the odds ratio of wanting to engage in bridge employment in a different field [OR = 1.72, 95% CI = (1.32-2.23)]. The desire to make better use of ones skills was positively related to wanting to engage in bridge employment in a different field [(OR = 1.34, 95% CI = (1.10-1.65)]. The desire to earn more money was not significantly associated with the probability of employees wanting to engage in bridge employment in a different field instead of full retirement. Nevertheless, employees who had more (vs. less) concerns about potential changes in the benefit system were less likely to engage in bridge employment in a different field instead of full retirement [OR = 0.69, 95% CI = (0.55-0.87)].

#### *Career bridge employment vs. full retirement*

The results of the second comparison showed that age, non-work interests, the desire to make better use of skills, and the desire to earn more money were significantly related to employees wanting to engage in career bridge employment instead of full retirement. Age was negatively related to career bridge employment [OR = 0.49, 95% CI = (0.35-0.70)]. Thus, belonging to an older age group made it less likely for the individual to want to engage in career bridge employment instead of full retirement than belonging to the next youngest age group. Non-work interests proved to be related to bridge employment intentions in such a way that having stronger (vs. weaker) non-work interests decreased the odds of wanting to engage in career bridge employment compared to full retirement [OR = 0.62, 95% CI = (0.49-0.78)]. A good job market was not significantly related to employees wanting to engage in career bridge employment instead of full retirement. Out of the work-related factors, both the desire to have better use of one's skills [OR = 1.65, 95% CI = (1.12-2.26)] and to earn more money [OR = 1.47, 95% CI = (1.08-1.99)] increased the odds ratio of employees wanting to engage in career bridge employment instead of full retirement.

#### *Career bridge employment vs. bridge employment in a different field*

This last comparison showed that age, gender, and non-work interests were significantly related to employees wanting to engage in career bridge employment instead of bridge employment in a different field. Age as well as gender was negatively related to career bridge employment. This indicated that belonging to an older (vs. the next youngest) age group made it more likely for the employee to want to seek bridge employment in a different field instead of

career bridge employment [OR = 0.65, 95% CI = (0.46-0.91)]. Compared to women, men were less likely to want to engage in career bridge employment instead of bridge employment in a different field [OR = 0.30, 95% CI = (0.16-0.57)]. Non-work interests were related to employee bridge employment intentions so that lower (vs. higher) non-work interests increased the odds ratio of bridge employment in a different field instead of career bridge employment [OR = 0.64, 95% CI = (0.51-0.80)]. Furthermore, a good job market did not significantly increase the probability of wanting to engage in bridge employment in a different field instead of career bridge employment. Finally, the relationships between bridge employment intentions and the desire to earn more money were statistically non-significant.

## 6 DISCUSSION

The purpose of the studies included in this dissertation was to explore the antecedents and predictors of early retirement, full retirement, and bridge employment intentions as well as age-related differences in reward preferences. Attention was given to gender differences among work-related psychological antecedents and predictors, which have been largely neglected by previous retirement studies (Wang et al. 2008; Wang et al. 2009). In addition, the study on aging municipal employees offered a chance to evaluate the stability of predictors of early retirement intentions. This is in accordance with Beehr's (1986) model of the retirement process. The current studies draw upon several theoretical perspectives, such as continuity theory (Atchley 1989), the life course perspective (Elder 1995), theories on motivation and development across the life-span (Kanfer & Ackerman 2004), and the meaning of work for older employees (Mor-Barak 1995). In the next section, the main findings, theoretical contributions, practical relevance of the main findings, methodological considerations, and suggestions for future research will be briefly discussed.

### 6.1 Main findings

#### *Age-related differences in reward preferences*

This study indicated that Finnish nurses recognized both financial and non-financial elements in their rewarding. Both reward elements were highly appreciated and clearly identified by the nurses. This study also showed that there were age-related differences among their financial reward preferences, but not among their non-financial preferences. Furthermore, older and more experienced nurses tended to prefer financial rewards compared to younger age groups. This result could indicate that in comparison to younger nurses, older nurses are more motivated by money (see Stajkovic & Luthans 2001, 2003). The finding could also mean that older nurses place high value on the financial factor in their decision to continue working (see Mor-Barak 1995).

However, there are a few situational factors that might have influenced older nurses' higher preference for financial rewards in the current study.

First, the traditional increment system in the public sector has merited years served in the organization, which means that the more experienced nurses receive higher pay. Hence, higher pay might have served as a positive reinforcement for older nurses in this study. Besides its monetary value, pay often indicates how important the person is to the organization. According to international research, increments can be seen as a way of recognizing older nurses' skills and as an expression of respect from the organization (Lum et al. 1998). Second, at the time of gathering data for this study (2004-2005), employee pension levels were still highly dependent on the earnings of the last years spent at work (Finnish Centre for Pensions 2008). This might in turn explain the current result of older respondents' higher preference for financial rewards. Third, Finnish nurses have been extremely dissatisfied with their earnings. In 2007, nurses demanded significant pay raises and were successful after long and tough negotiations. The dissatisfaction might have highlighted the meaning of financial preferences during the time of the data collection in the present study. Previous studies regarding age-related differences in reward preferences as well as in work motivation are both scarce and to some extent inconsistent (Doering, Rhodes & Schuster 1983; Kanfer & Ackerman 2004). On the whole, there has been some indication that preferences shift from pay rises to other benefits while simultaneously becoming more diverse as employees age (Doering, Rhodes & Schuster 1983).

*Personal, health, and work-related psychological factors in association with early retirement intentions*

The results of the age management study indicated that in addition to personal and health factors, work-related psychological factors were associated with the various intentions regarding work in late career. Health-related early retirement intentions were common among nurses. Every fourth respondent felt that their health would not allow them to continue working until the age of 63. Respondents in the age management studies were working at the Kuopio University Hospital during a period of economic growth (2006-2007), with no layoffs in sight. Therefore, the main early exit routes from working life at old age for these nurses would be early retirement at the age of 62 or at an earlier age (old occupationally lower retirement age agreements), disability pension, or voluntary unemployment (see Gould 2006).

The age management studies indicated that reward satisfaction along with other personal and health factors were linked to health-related early retirement intentions. Poor self-perceived health, rather than older age proved to be more closely connected to early retirement intentions in this study. According to existing research, being older does not automatically mean that the individual wants to retire, but poor health forces nurses to consider early retirement (Forma, Tuominen & Tomppo-Väänänen 2006; Gould 2006). Several prior studies have found that health has a significant impact on employee retirement decisions (Beehr 1986; Feldman 1994; Taylor & Shore 1995; Adams & Beehr

1998; Kim & Feldman 1998; Shultz, Morton & Weckerle 1998; Shultz & Wang 2007). According to this study, women were far more likely to feel that their health would not allow them to continue working until the age of 63 compared to men. The result should however, be interpreted cautiously due to the small sample of men in the age management studies. In fact, related previous studies have found that women are more likely than men to continue working longer in full (Harkonmäki 2007) or part time work (Kim & DeVaney 2005).

In this study, nurses' satisfaction with their rewards decreased the likelihood of health-related early retirement intentions. Previous research has shown that elements such as how pay rises are determined, recognition, and opportunities for personal growth are significant in keeping employees working longer (see Minnick 2000; Van Dalen & Henkens 2002; Elovainio et al. 2005; Hasselhorn et al. 2005). This study also indicated that low job control was associated with health-related early retirement intentions, and thus corroborated several previous studies (Elovainio et al. 2005; Siegrist et al. 2007; Heponiemi et al. 2008).

#### *Gender-specific differences in the stability of antecedents and predictors of early retirement intentions*

The follow-up study on aging municipal employees indicated that negative perceptions about work and low work satisfaction, and even high general life satisfaction were associated with early retirement intentions among women. For men, good self-rated work ability and good perceived health decreased early retirement intentions, whereas negative perceptions about work had the opposite effect in this study. These findings offer support to previous studies in regard to poor health (Beehr 1986; Feldman 1994; Taylor & Shore 1995; Adams & Beehr 1998; Kim & Feldman 1998; Shultz, Morton & Weckerle 1998; Shultz & Wang 2007) and the adverse affects of work (Shultz, Morton & Weckerle 1998; Saurama 2004; Harkonmäki 2007; Siegrist et al. 2007) as indicators of early retirement intentions. More than 70 percent of the respondents in the study on aging municipal employees stated in 1992 that they were considering early retirement. In addition, early retirement intentions were more common among men than women. This aligned with previous Finnish studies (Harkonmäki 2007). During the time of the follow-up in the study on aging municipal employees, respondents did not face the threat of unemployment pension, which according to a related study by Gould (2006) was the biggest form of early retirement in the later part of the 1990s. The economic recession, which started in 1991-1992, had a milder effect on the municipal sector compared to the open markets (Hytti 2002). Thus, the remaining early exit routes for the respondents in this study were disability pension, individual early retirement pension, and early old age pension (with permanently reduced benefits).

The study findings further suggest that personal, health, and work-related psychological factors are stable predictors of early retirement intentions. The number of early retirement predictors for women and men increased with time and was clearly dependent on the proximity of old-age retirement in the current study. Contrary to previous research (Beehr 1986; Feldman 1994; Shultz &

Wang 2007), this study suggests that being older, especially for men, consistently decreased the probability of early retirement intentions. This might be the result of employees either retiring early due to poor health or being older, or healthier employees continuing to work. In this study, negative perceptions about work proved to be one of the most powerful and stable predictors of employee early retirement intentions, which in accordance with previous studies, indicates the importance of adjusting working life to the needs of older individuals (Ilmarinen 2006) in order for work to be a positive force (Hakanen, Perhoniemi, Toppinen-Tanner in press).

*Personal and work factors associated with full retirement and bridge employment intentions*

The Merit Principle Survey 2000 study on retirement and bridge employment intentions among middle-aged and older U.S. federal government employees first found that male employees who were younger, had a higher level of education, perceived the job market to be good, wanted to have better use of their skills, and had less concerns about changes in their benefits were more inclined to engage in bridge employment in a different field than retire fully. Second, that employees who were younger, had fewer non-work interests, wanted to have better use of their skills, and had the desire to earn more money were more inclined to engage in career bridge employment than retire fully. Third, that younger female employees with less non-work interests were more likely to engage in career bridge employment instead of bridge employment in a different field.

The respondents gave different reasons for intentions regarding full retirement or engaging in bridge employment in a different field, or full retirement or engaging in career bridge employment. This confirms previous findings, which have identified different types of antecedents of bridge employment decisions (Weckerle & Shultz 1999; Wang et al. 2008; Gobeski & Beehr 2009). However, the current study was not as successful in demonstrating the differences between intentions to engage in bridge employment in a different field and career bridge employment (see Wang et al. 2008; Gobeski & Beehr 2009). To some extent this may be due to the fact that the Merit Principle Survey 2000 investigated bridge employment intentions and not decisions in retrospect. The antecedents might be stronger and more definitively identified if the decision between full retirement and the two types of bridge employment had already been made (Wang et al. 2008; Gobeski & Beehr 2009).

The fact that perceived health was not associated with retirement or bridge employment intentions was a somewhat unexpected finding in this study. A similar result was reported by Davis (2003), although most studies have found that retirement intentions, as well as decisions, are largely dependent on employee health (Beehr 1986; Feldman 1994; Taylor & Shore 1995; Kim & Feldman 1998; Shultz, Morton & Weckerle 1998; Kim & Feldman 2000; Wang et al. 2008). Unlike other studies (Kim & DeVaney 2005; Wang et al. 2008) the current study found that a higher level of education was not positively related to career bridge employment instead of full retirement, nor



did it differentiate between the two types of bridge employment intentions. Other studies have established that the level of education and its relationship with bridge employment decisions is complicated (Wang et al. 2008) and may be rather gender-dependent (Talaga & Beehr 1995). In this study, employees considering full retirement had lower levels of education compared to employees considering bridge employment. Researchers have indicated that in addition to formal education, older employees possess better job-related skills, which may be more likely to lead them to engage in career bridge employment (Gobeski & Beehr 2009).

In the current study, the desire to earn more money was significantly associated with the likelihood of employees wanting to engage in career bridge employment instead of full retirement. This might be a sign of employees wanting to secure their incomes during retirement. In all, money did not play a significant role in the retirement or bridge employment intentions in the current study (see Dendinger, Adams & Jacobson 2005). Loi and Shultz (2007) found in a related study that older employees preferred the financial factor less than other age groups as a motive for continuing to work. A recent study also indicated that older employees might settle for lower pay in the hope of finding a more meaningful job (Johnson, Kawachi & Lewis 2009). There has also been some indication that satisfaction with one's current financial situation allows employees to consider early retirement (Weckerle & Shultz 1999; Kim & DeVaney 2005). The Merit Principle Survey 2000 data was collected at a time of economic growth, which should be taken into consideration when interpreting the results of Paper IV. At this time, older employees did not necessarily have to worry about losing their pension savings and not being able to receive the pension they were entitled to receive (see Giandrea, Cahill & Quinn 2009).

## **6.2 Theoretical contributions**

The study on age-related reward preferences partly contribute to theories on motivation and development across the life-span (Kanfer & Ackerman 2004) and partly to the meaning of work for older employees (Mor-Barak 1995). The study found that older nurses had a higher preference for financial rewards compared to younger nurses. As discussed earlier, these differences could be a result of motivational factors, and partly due to different situational factors. Nevertheless, the present findings along with previous inconclusive findings regarding age-related differences in reward preferences (Doering, Rhodes & Schuster 1983) indicate that age-related differences in reward preferences may be better interpreted on an individual level, instead of as an age-related phenomenon. Kanfer and Ackerman (2004) suggest that research on age-related differences in work motivation ought to go beyond chronological age and focus on the aging of individuals, rather than that of one coherent group (Kanfer & Ackerman 2004). As Kanfer and Ackerman (2004) further suggest, in exploring

individual change, one should take both inter-individual and intra-individual variation into consideration. Correspondingly, in order to study the development of reward preferences according to the life-span perspective, one should obtain longitudinal data regarding the possible period- and cohort-related changes in these reward preferences. Results presented in this study offer information regarding a certain time in the lives of the nurses. Aligned with Kanfer and Ackerman's (2004) suggestions, reward preferences in the current study seem to be partly the result of inter-individual variation and somewhat connected to external forces.

Preferences among older employees for certain rewards can partly be interpreted with the help of Mor-Barak's (1995) Meaning of Work Scale, which is based on Alderfer's (1969) human needs theory. In the present study, the age-related differences in non-financial rewards, which include recognition from supervisor and the opportunity to use skills diversely, turned out to be statistically non-significant. A closer look at data from the age management studies revealed that nurses aged 20-29-years had the lowest preference for non-financial rewards, whereas the oldest age group had the highest preference for them. This finding partly supports previous results regarding employment seeking among older employees (Mor-Barak 1995; Loi & Shultz 2007), which have shown that older employees tend to value recognition, possibilities for sharing knowledge, and personal satisfaction. Older employees who typically have substantial work-specific knowledge, might be motivated by the possibility to share their knowledge with other members of the work organization (Kanfer & Ackerman 2004). This could be achieved through introducing some form of mentoring program (Lindbo & Shultz 1998; Shultz 2001).

Even if retirement lacks specific theories (Beehr 1986), this study relied on continuity theory (Atchley 1989) and the life course perspective (Elder 1995) when interpreting the findings regarding antecedents and predictors of early retirement, retirement, and bridge employment intentions, as well as gender-related differences. Results of the study indicate that continuity theory and the life course perspective can serve as a background for understanding antecedents and predictors of early retirement, retirement, and bridge employment intentions. In addition, gender-related differences discovered in this study can partly be interpreted through the life course perspective (see Moen 1996; Quick & Moen 1998).

In addition to several personal, health, and work factors, this study indicated that work-related psychological factors can be associated with employee early retirement, full retirement, and bridge employment intentions. In the current study, health remained one of the most significant antecedents and predictors of early retirement intentions. According to Kim and Feldman (2000), the older the employee becomes, the more unlikely s/he is to achieve continuity in life through work, due to health limitations. In accordance with continuity theory, employees can seek continuance at old age through bridge employment (Gobeski & Beehr 2009). This study indicated that work can be a

positive force for middle-aged and older employees in terms of job satisfaction, the possibility to develop oneself, and job control, which results in the willingness to continue working even after retirement. This study also found that work can be a negative force in employees' lives, which manifests itself through negative perceptions about work and ultimately predicts early retirement intentions. Furthermore, these reactions proved to be stable predictors of early retirement intentions for women and men from mid-life onwards.

Gender differences detected in retirement intentions in this study can partly be interpreted through the life course perspective. The study on aging municipal employees indicated that men were more inclined to have early retirement intentions compared to women. This finding may indicate that there are gender differences in municipal professions (see Gould et al. 2008). According to Talaga and Beehr (1995), differences are likely in the working life of women and men, which are interlinked with the life course of a person. As the life course perspective suggests, in retirement decisions, several individual attributes, as well as work-related psychological and family-related variables come into play (Elder 1995). The Merit Principle Survey 2000 showed that men were more inclined to seek bridge employment in a different field compared to women. This current finding may be a sign of men seeking continuity in their lives (Atchley 1989) through bridge employment in a different field.

The working history of women is likely to be more discontinuous compared to men, as women are typically seen as the primary caretakers of children and thus often assume the primary responsibility for child-rearing. These responsibilities may result in women entering working life later and experiencing several entries and exits during their careers (Talaga & Beehr 1995). Previous studies are inconclusive on whether or not women are more inclined to continue working in old age compared to men (Davis 2003; Kim & DeVaney 2005; Wang et al. 2008). There have been some indications that the traditional gender roles are now changing towards a more gender-equal state (Smith & Moen 1998; Pienta 2003). In this study, one indication of this change may be that neither the financial situation of the household nor future retirement income predicted early retirement intentions among these respondents. Thus, women did not seem to be financially disadvantaged or dependent on men in this particular study.

This study indicated that in terms of early retirement intentions, women seem to be more affected by work-related psychological factors and men more affected by health. Previous studies have found that men are more likely to be retired due to disability compared to women (Harkonmäki 2007). Non-work and family-related factors in this study acted as forces pushing older employees into retirement and pulling them to work. Female employees who were living alone were more likely to retire later compared to individuals who were living with a spouse. This might indicate that women who had no spouse were more engaged in their work and thus had less early retirement intentions. Furthermore, female employees who in this study were dissatisfied with their

lives in general were more likely to have less early retirement intentions. In light of these findings it seems as if work has a significant meaning in terms of continuance, psychological well-being, and as a positive resource especially in the lives of older women.

### **6.3 Practical relevance of the main findings**

The findings of this study offer several practical implications for individual employees, employers, organizations, and government decision-makers due to the timely global issue of early retirement. Maintaining employee work ability and preventing their health from declining, together with ensuring employee well-being at work are, according to this study, the central elements in keeping employees working longer. Adverse work and health factors predicting early retirement intentions can be detected as early as middle age. Hence, in order to keep employees working longer, organizations ought to focus on the work ability and well-being of aging employees from middle-age onwards. There are indications that especially the negative psychological aspects of work cause older employees to consider early retirement. On the other hand, this study indicates that work can act as a source of well-being and thus motivate employees to try to continue working until retirement and even consider participating in bridge employment after retirement. In addition, offering employees adequate pay and other financial rewards can motivate older employees and eventually keep them working longer. Employee rewards should include non-financial elements as well. As the age structures in working life are changing, it is increasingly important to obtain a greater understanding of how to motivate older employees at work.

Work has without a doubt become one of the most central elements in the lives of both men and women. After all, we spend several decades working before going into retirement. Due to longevity, employees are spending more time in retirement and are simultaneously healthier than ever. Leaving behind a long career can cause older individuals to experience feelings of emptiness and a sense of loss. The number of women participating in the workforce has grown globally in the past decades. This study indicates that work is a significant part of the well-being of older women.

Retirement due to ill-health can be a relief to an older individual. In this study poor work ability and perceived health were related to early retirement intentions, especially among men. Organizations can help promote older employee work ability in several ways. Ilmarinen and Rantanen (1999) have proposed several means, such as decreasing the physical work load, making adjustments to work-rest schedules, and introducing age-management practices, flexible working time schedules, and teamwork. Even if the organization can support the well-being of an employee, ultimately, the employee has the responsibility to preserve his or her health. Ensuring

sufficient health care services along with adequate preventive measures is essential due to the high number of disability pensions in Finland.

In Finland, the positive trend of age-respecting organizational cultures during the last decade has partly been disrupted by the global recession in 2008, as companies started to offer older employees the possibility to take the unemployment tunnel into retirement. Hence, a large portion of older employees, who could have continued working were and will be permanently excluded from the workforce. At the moment, countries worldwide are struggling with similar challenges. In the United States, the situation of older employees has taken a turn for the worse both in terms of pension benefits and employment opportunities.

Despite the current economic down turn, it will be likely that employees need to enter working life earlier and work longer in the future. In Finland this primarily means that employees should retire between the ages of 63 and 68. The situation in Finland is somewhat different from other European countries, since there are very few workers arriving from other countries. Neither is it typical for Finnish employees to continue working after their retirement, even though it would be possible after the pension reform in 2005. According to Finnish statistics, out of the 63-67 year old individuals, only 6.5 percent were still working and 5.8 percent were working during retirement at the end of 2007 (Finnish Centre for Pensions 2009). These figures do not include entrepreneurs or agricultural entrepreneurs. While in the United States more than 47 percent of older individuals participated in some form of bridge employment in 2002 (Cahill, Giandrea & Quinn 2006). This phenomenon has largely been brought on by the pension system in the United States. Due to the economic down turn and the structure of the defined-contribution pension plan, where the benefits are linked to investment performance, employees might not be able to afford to retire (Giandrea, Cahill & Quinn 2009). In addition, there have been several changes in the Social Security retirement policy act as incentives for older Americans to remain longer in the workforce (Hedge, Borman & Lammlein 2006). For instance, the level of pensions have been scaled back, the age in which retirees can receive full pension benefits has been raised from 65 to 67, and employees who engage in work after they have reached their full pension age will not face deductions in their pensions (Bach-Othman 2006).

In terms of timing, the emergence of older employees as valuable organizational resources will be likely to occur after global economies start to recover from the current recession. In addition to postponing retirement, employees might also be encouraged to take up part or full-time work after retirement from their career. Before the participation of older employees in the workforce will increase, their capabilities must be re-discovered and re-recognized. Several facts speak on behalf of growing participation of older employees in future working life. The Finnish government and all labor market organizations are committed to supporting the employment of older individuals. As a concrete sign of this commitment, the government has recently appointed a committee lead by the Finnish Centre for Pensions to

discover new ways in which older employees could stay at work longer. Furthermore, older employees are better educated than ever before. In addition to formal education, they possess tacit knowledge, which is vital for organizations. These facts can support the emergence of late retirement as well as bridge employment in the future.

#### **6.4 Methodological considerations**

This study is based on data collected from the age management studies, the study on aging municipal employees, and the Merit Principle Survey 2000. Next, the strengths and limitations of these studies will be discussed. As for the age management studies, data were gathered for the purpose of these particular studies. The strength of the data was the broad set of widely used, international measures on reward satisfaction, job control, and several other scales, all of which proved to be reliable in terms of internal consistency (Cronbach Alpha). The sample size was fairly large ( $n = 645$  and  $n = 510$ ), which made it possible to perform several statistical analyses. The reliability of the confirmatory factor analysis was determined with several standard statistical measures, such as  $\chi^2$ , RMSEA, NFI, and SRMR. Normality assumptions were considered when exploring differences in reward preferences.

The strength of the study on aging municipal employees lies with the longitudinal data set. In addition, cross-sectional data was used to study the stability of the predictors of early retirement intentions. The respondents were working in a wide range of municipal occupations, including both white and blue-collar jobs. Men and women were relatively equally represented in the study, which made it possible to form separate regression models for both genders in Paper III (see Talaga & Beehr 1995; Quick & Moen 1998; Beehr & Bennett 2007). A limitation of the data might be the fairly long follow-up period from 1981 to 1992. The respondents were near their full retirement age at the time of the follow-up in 1992. Nearly 30 percent of the baseline study participants had suffered from various health limitations and had ultimately retired due to disability during the follow-up period. This might have had an effect on the results, since employees continuing to work were healthier than the average workforce.

The strength of the Merit Principle Survey 2000 lies with the possibility to explore both intentions regarding career bridge employment and bridge employment in a different field (see Wang et al. 2008; Gobeski & Beehr 2009; Wang et al. 2009). In addition, the study sample included individuals from a broad set of professions within the federal government. Furthermore, the respondents in the Merit Principle Survey 2000 all worked under fairly similar retirement plans. This in turn might have excluded some of the variation in the study results, which could have been caused by differences in institutional and legislative issues. As to the limitations, because some of the data used in the

Merit Principle Survey 2000 and the study on aging municipal employees was archival and therefore was not collected for the purposes of these particular studies, some of the measures could have been better established (see Kosloski, Ekerdt & DeViney 2001; Wang et al. 2008).

Studies included in this dissertation have certain limitations in common, which need to be taken into account when interpreting the findings (see Guest 2001). As all the data in these studies were reported by respondents, some self-reported bias might have influenced the results. Hence, when reporting the study in Paper IV, steps were taken to control for common method variance. Common method variance is the variance related to the measurement method, rather than the construct of interest (Podsakoff & Organ 1986).

Three of the studies in this dissertation explored retirement-related intentions. The studies however, did not concern individuals who had made the actual decision to retire early or engage in bridge employment. Nevertheless, as mentioned earlier, the intent to retire has been found to be a powerful indicator of the actual event of retirement (Prothero & Beach 1984; Beehr 1986; Ilmarinen 2006; Beehr & Bennett 2007; Harkonmäki 2007) and it has been widely used in previous studies.

The age management and Merit Principle Survey studies both rely on cross-sectional data, which is a limitation of these studies. Obtaining longitudinal data would make it possible to exclude period and cohort effects, which might have had an effect on the results regarding age-related differences in reward preferences and the various retirement intentions. Cross-sectional data does not allow the researcher to make assumptions regarding the causal relationships between the constructs (Cook & Campbell 1979). Longitudinal research would also be preferable in terms of better incorporating the life course perspective in retirement studies. Due to the nature of retirement, it would be best studied in a longitudinal setting, with the data gathering process starting during the employees' career and extending into retirement. Unfortunately, this kind of data rarely exists (Beehr 1986).

The generalizing of the research findings is somewhat problematic especially in non-experimental, cross-sectional studies, as the results can partly be caused by several context-specific factors. Data for Papers I and II were collected from nurses working in the Finnish health care sector, which is a strongly female oriented field. Hence, the results would be best generalized in that particular field. The fact that the study on aging municipal employees was conducted in the municipal sector might limit generalizing the results to the government or private sector. These sectors differ from each other in terms of institutional factors, such as retirement legislation, labor agreements, and pension schemes. However, knowledge of the particular characteristics of the municipal sector also enabled controlling for institutional factors to a certain extent. Since the data for the Merit Principle Survey 2000 was collected in the U.S. federal government, generalizing the results beyond the U.S. public sector must be done with caution, since the retirement practices in the private sector are likely to differ from those reported in this study.

## 6.5 Future directions

Early retirement has become more popular in Western countries in recent years (Hakola & Uusitalo 2004; Börsch-Supan 2005). Studies concerning retirement decisions have also become more popular, although there is still much to learn about this complex phenomenon (Beehr & Bennett 2007) on a micro-, meso-, and macro-level (Shultz & Adams 2007). Retirement decisions are largely dependent on timing and choice (Elder 1995; Moen 1996), which can potentially have an effect on both retirement transitions and well-being in late-life. In accordance with the life course perspective, the timing and interdependence of age-graded trajectories in different level-contexts (Szinovacz 2003) jointly influence individual paths into the retirement decision (Kim & Moen 2002).

In future studies, the research traditions of retirement in a global context, macro-level institutions and cultural factors ought to be studied in a systematic and longitudinal manner. Researchers should also carefully consider the implications that shifts in the global economy can have on employee retirement-related decisions. For instance, in the United States, employees might be forced to continue working due to their economic situation. This in turn can cause problems for organizations struggling with their finances. In addition, the possible lack of employees in Western countries does not concern all organizations in all branches of the economy. Some of them will need less new employees due to automation and outsourcing solutions.

Finnish retirement research has focused on the disability pension, since a large number of older employees in Finland retire early due to poor health. Other forms of voluntary early retirement, which according to the renewed pension scheme in Finland, mean choosing to retire before the age of 63 years, have received less attention. The goal of the pension reform in 2005 was to keep employees working longer, at least until the age of 63 years. In the future, research should explore retirement from a perspective of late retirement and bridge employment, in addition to the disability pension tradition. More information is needed on how the desire to continue working could best be supported from an organizational and managerial point of view. As this study has indicated, early retirement and bridge employment are associated with work-related psychological factors.

As discussed previously, a common limitation in retirement research from an industrial and organizational psychological perspective is the lack of longitudinal data. Therefore, future studies should be longitudinal as well as theoretically well grounded. Existing cross-sectional data could be complimented with register-based information regarding employee work and health behavior in late-life. Longitudinal data would make it possible to address more complex issues regarding both bridge employment and retirement. In addition, focusing more closely on employees who have chosen to retire early or to engage in bridge employment might offer new information on this rather complicated choice-mechanism. For example, examining the



dynamic nature of bridge employment (Wang et al. 2009) is justifiable in order to better understand the retirement process and its connections to organizational and work-related issues over time. Aging and age-related changes in the life course are best studied with the help of advanced statistical methods, such as mixture latent growth curves and latent Markov models. Strides in this direction have been made by Wang et al. (2008) and Wang et al. (2009).

## 7 CONCLUSIONS

This study on early retirement, full retirement, and bridge employment intentions is highly relevant due to the changing age demographics and the tendency among older employees to retire before their official retirement age. It contributes to previous retirement research in numerous ways. The current study indicates that several personal, health, work, and work-related psychological factors are significant antecedents and predictors of employee early retirement, full retirement, and bridge employment intentions. In addition, older employees have a higher preference for financial rewards compared to younger employees.

According to this study, work plays a dual role in the lives of middle-aged and older employees. Work can be a source of well-being as well as stress and discomfort. The study results show that adverse work and health factors detected in middle age can predict subsequent early retirement intentions. On the other hand, employee willingness to continue work, engage in bridge employment, and ultimately retire later in life might be affected by good perceived health and work ability and positive work-related psychological factors, such as the absence of negative perceptions about work, reward satisfaction, and high job control and job satisfaction. These findings highlight the importance of both organizational management practices and managers personal skills.

Continuity theory and the life course perspective offer a theoretical foundation for interpreting older employee early retirement and bridge employment intentions. In addition, older employee reward preferences and work motivation can be interpreted through development across the life span and the meaning of work for older employees. These theories provide a background for understanding the complex nature of retirement and work motivation on an individual level.

Viewing the life course in terms of gender-differences is warranted. In this study the life course of men and women seem to differ from each other, but not necessarily in the sense of traditional gender roles. Furthermore, gender-differences in the stability of predictors of early retirement intentions were

discovered. Men seem to be more strongly affected by poor health at older age, whereas women seem to be more affected by the positive and negative psychological aspects of work. Familial as well as life quality factors also appear to play a role in women's retirement intentions.

An understanding of employee reward preferences is essential in keeping different aged employees working longer. The fact that older employees prefer more financial rewards, such as pay, pay increments, and pay rises compared to younger employees in this study can be due to both inter-individual variation (i.e., variation between individuals) and several situational factors (i.e. changes in the increment system). In light of the employment seeking behavior and the meaning of work for older employees, the results indicate that financial means of rewarding are essential in motivating older employees. In addition to a satisfying amount of financial reward, older employees prefer recognition, the opportunity to use skills diversely, flexible working hours, and job security.

Understanding retirement and bridge employment decisions in late-career in terms of timing, individual choice, and the interplay between work and employees as psycho-physical entities can help us come to grips with the challenges of the aging workforce in future decades. However, the present findings need to be further investigated using longitudinal study designs on micro-, meso-, and macro-levels.

## YHTEENVETO (FINNISH SUMMARY)

### Keski-ikäisten ja ikääntyneiden työntekijöiden eläke- ja työssä jatkamisaikheet

Länsimainen työväestö ikääntyy seuraavien vuosikymmenten aikana ennennäkemättömällä vauhdilla. Suomessa etenkin suurten ikäluokkien eläköityminen ja työelämään siirtyvien nuorempien ikäluokkien pienempi koko aiheuttavat haasteita tulevaisuudessa niin työvoiman riittävyyden, työssä jaksamisen, kuin eläkkeiden rahoituksen kannalta. Ikääntyvän työväestön myötä työntekijöiden hyvinvointi, työkyky ja työssä jatkaminen nousevat keskeiseen asemaan organisaatioiden johtamistapoja suunniteltaessa. Työntekijöiden työkyvyn säilyttäminen ja edistäminen ovat keskeisessä asemassa työssä jatkamisen kannalta.

Suomessa vuoden 2005 alusta voimaan astunut eläkeuudistus pyrkii osaltaan vastaamaan tulevaisuuden haasteisiin tukemalla työntekijöiden työssä jatkamista, tarjoamalla heille taloudellisia kannustimia ja tukkimalla joitain varhaisen eläköitymisen reittejä. Lisäksi eläkeuudistuksen myötä, eläkkeelle jäänyt työntekijä voi joustavammin jatkaa työntekoa niin kutsutun siltatyön muodossa (bridge employment). Toisin kuin Yhdysvalloissa, tämä työnteon muoto on toistaiseksi varsin harvinainen Suomessa. Verrattuna useisiin Euroopan maihin ja etenkin Yhdysvaltoihin, Suomessa jäädään edelleen varhain eläkkeelle. Nämä eroavaisuudet johtuvat osittain erilaisista eläkejärjestelmistä ja eläketurvan tasosta. Vuonna 2008 alkanut maailmanlaajuinen taantuma on hetkellisesti vienyt huomion pois ikärakenteen muutoksesta ja heikentänyt ikääntyvien työllisyys-tilannetta. Tästä huolimatta, useat yritykset tulevat kohtaamaan työvoimapulaa ja työntekijöiden on tulevaisuudessa astuttava nuorempana työelämään ja jatkettava työntekoa useita vuosia nykyistä pidempään.

Työmotivaation ja palkitsemispreferenssien muutoksista yksilön ikääntymisessä on varsin vähän tietoa. Oletettavaa kuitenkin on, että työväestön ikääntymisessä tutkijat kiinnostuvat enenevässä määrin näiden ilmiöiden ikäsidonnaisuudesta. Työväestön ikärakenteen muutoksen on myös arveltu heijastuvan organisaatioiden johtamistapaan. Organisaation johtamisen kannalta onkin keskeistä tietää, mitä palkkioita henkilöstö arvostaa. Tämä tietous saattaa auttaa johtoa houkuttelemaan uusia työntekijöitä organisaatioon sekä motivoimaan ja pitämään nykyinen henkilöstö pidempään töissä.

Eläköitymistä koskevat teoriat juontavat juurensa yleisistä ikääntymisteorioista. Tässä tutkimuksessa eläköitymistä ja työssä jatkamista tarkastellaan yksilötasolla jatkuvuuden (continuity theory) ja elämänkulun (life course perspective) näkökulmista. Näiden teorioiden avulla voidaan tulkita ja ymmärtää eläke- ja työssä jatkamisaikaisiin yhteydessä olevia tekijöitä, sukupuolen vaikutusta eläkkeelle siirtymiseen sekä yksilöiden hyvinvointia eläkkeellä oloaikana. Työntekijöiden palkitsemispreferenssien ikäsidonnaisia eroavaisuuksia tarkasteltiin tässä tutkimuksessa puolestaan motivaatioteorioiden ja työn merkityksen (the meaning of work for older employees) näkökulmasta. Eläkkeelle jäämistä

on tutkimuksissa tarkasteltu prosessina, joka saa alkunsa eläkeaikeista. Työntekijöiden ikä, terveys, työkyky, vaikutusmahdollisuudet sekä henkilökohtaiset ja perheeseen liittyvät tekijät ovat aiemmissa tutkimuksissa liitetty eläkeaikeisiin ja työssä jatkamiseen. Viime aikoina on myös työhyvinvointiin tai työhön liittyvien psykologisten tekijöiden todettu olevan yhteydessä työntekijöiden eläkeaikeisiin ja työssä jatkamishalukkuuteen. Varsin vähän tiedetään kuitenkin näiden tekijöiden muutoksista elämänkulun tai sukupuolten välisten erojen näkökulmasta.

Tämän väitöskirjan tavoitteena oli tarkastella työntekijöiden kokemien yksilöllisten, terveyden ja työn psykologisiin ulottuvuuksiin liittyvien tekijöiden yhteyttä eläke- ja työssä jatkamisaikeisiin. Eläke- ja työssä jatkamisaikeisiin yhteydessä olevien tekijöiden pysyvyyttä tarkasteltiin tutkimuksessa yhdentoista vuoden seurannassa. Lisäksi kiinnitettiin huomiota mahdollisiin sukupuolten välisiin eroihin eläkeaikeita ennustavien tekijöiden osalta. Työssä jatkamista tarkasteltiin tässä tutkimuksessa siltatyön (bridge employment) näkökulmasta. Lisäksi tutkimuksen tavoitteena oli selvittää työntekijöiden palkitsemispreferenssien mahdollista ikäsidonaisuutta.

Tutkimusaineisto koostui kolmesta erillisestä, määrällisestä kyselytutkimuksesta. Ensimmäinen aineisto kerättiin Jyväskylän yliopistossa Ikäjohtamisen hankkeessa. Tutkimukseen osallistui ensimmäisessä vaiheessa 645 sairaanhoitajaa Keski-Suomen keskussairaalaista ja Kuopion yliopistollisesta sairaalasta vuosina 2004–2005 ja toisessa vaiheessa 510 hoitohenkilöstön edustajaa Kuopion yliopistollisesta sairaalasta vuosina 2006–2007. Toinen aineisto, Ikääntyvien kuntatyöntekijöiden pitkittäistutkimus (KVTEL 1981–1997), kerättiin Työterveyslaitoksen toimesta vuosina 1981, 1985, 1992 ja 1997. Tutkimukseen osallistui 6257 työntekijää vuonna 1981. Kolmannen tutkimusaineiston keräsi U.S. Merit Systems Protection Board Yhdysvaltain valtionhallinnossa vuonna 2000 (Merit Principle Survey-kysely). Poikittaistutkimukseen osallistui lähes seitsemän tuhatta valtion palveluksessa työskentelevää henkilöä.

Tutkimuksessa havaittiin eläkeaikeiden olevan varsin yleisiä henkilöstön keskuudessa. Hyvän koetun terveyden ja työkyvyn, vähäisen työn välttämisen, yleisen passiivisuuden ja osallistumishaluttomuuden, palkitsemistyytyväisyyden, hyvien vaikutusmahdollisuuksien ja työtyytyväisyyden todettiin olevan yhteydessä työssä jatkamisaikeisiin. Työ näyttää kahdenlaista roolia keskiikäisten ja iäkkäiden työntekijöiden elämässä. Työ voi olla hyvinvoinnin tai stressin ja pahoinvoinnin lähde. Tutkimus osoitti, että keski-ikässä havaitut työhön ja terveyteen liittyvät negatiiviset seikat ennustivat eläkeaikeita uran loppupuolella.

Sukupuolikohtaisia eroavaisuuksia ikääntyvien työntekijöiden eläkeaikeissa voidaan tarkastella elämänkulun näkökulmasta. Tässä tutkimuksessa heikoksi koettuun terveyteen liittyvät tekijät olivat voimakkaammin yhteydessä miesten eläkeaikeisiin aina keski-ikästä saakka. Alhaiseen työhyvinvointiin liittyvien seikkojen, kuten tyytymättömyyden työssä, työnvälttämisen, yleisen passiivisuuden ja osallistumishaluttomuuden, puolestaan havaittiin olevan yhteydessä naisten eläkeaikeisiin, aina keski-ikästä alkaen. Työn ulkopuoliset ja

perheeseen liittyvät tekijät toimivat niin eläkkeelle työntävinä, kuin työhön vetävinä voimina. Yksinasuvien naisten keskuudessa esiintyi vähemmän eläkeaikeita, verrattuna parisuhteessa asuviin. Elämäänsä yleisesti ottaen tyytyväiset henkilöt olivat harkinneet elämäänsä tyytymättömämpiä useammin eläkkeelle jäämistä. Tulosten perusteella työ saattaakin olla tärkeä osa työntekijöiden, etenkin yksin elävien naisten, hyvinvointia ja jatkuvuuden tunnetta.

Tutkimuksessa havaittiin lisäksi, että työntekijät arvostivat saamiaan rahallisia ja ei-rahallisia palkkioita. Ikääntyneet työntekijät arvostivat kuitenkin rahallista palkitsemista nuoria kollegojaan enemmän. Tulokset voivat yhtäältä johtua eri-ikäisten yksilöiden välisestä vaihtelusta, toisaalta tutkimukseen osallistuneen organisaation palkitsemisjärjestelmän rakenteesta tai tutkimusaineistoa kerätessä vallinneesta laajasta tyytymättömyydestä sairaalanhoitajien palkkoihin. Motivaatioteorioiden ja työnmerkityksellisyyden näkökulmasta, rahallinen palkitseminen on olennaista ikääntyvien työntekijöiden motivoimisessa. Rahallisten palkkioiden lisäksi ikääntyvät työntekijät arvostavat tunnustusta, mahdollisuutta käyttää taitojaan monipuolisesti, joustavia työaikoja sekä työn jatkuvuutta. Ikäryhmäkohtaiset erot osoittautuivat tilastollisesti ei-merkittäviksi ei-rahallisten palkitsemispreferenssien osalta.

Tutkimuksen perusteella voidaan päätellä, että työntekijöiden työhyvinvointiin ja terveyteen liittyvät tekijät näyttävät olevan yhteydessä eläkeaikeisiin aina keski-ikästä alkaen. Tämän vuoksi olisi ensiarvoisen tärkeää tukea työntekijöiden työkykyä ja jaksamista johtamisen keinoin jo keski-ikästä alkaen. Ikääntyvien työntekijöiden palkitsemispreferenssien syvällisempi tunteminen auttaa organisaatioita suunnittelemaan palkitsemisjärjestelmänsä siten, että ne motivoivat ja auttavat pitämään työntekijät kauemmin työssä. Työ voi olla merkittävä hyvinvoinnin ja jatkuvuuden lähde ikääntyvälle työntekijälle. Eläke- ja työssä jatkamisaikeita tulisi ymmärtää yhtäältä työn ja yksilön psykofyysisten ominaisuuksien välisen yhteensopivuuden näkökulmasta, toisaalta yksilöllisinä ratkaisuin, jotka ovat alttiita kulloinkin vallitseville yhteiskunnallisille vaikutuksille.

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