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A life with and without work

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LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00



Older people's occupations

A life with and without work

PIA HOVBRANDT

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Older people's occupations

A life with and without work

Pia Hovbrandt



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Eric Asaba, PhD, Associate Professor
Karolinska Institute

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<p>Abstract</p> <p>Introduction: The demographic changes with population ageing and a rapidly growing share of very old people will put an increasing pressure on the health and social care system. In order to both restrict early retirement and force people to extend their working life reforms are changing pension systems in many European countries. Besides that older people have to extend their working life it is important to optimize opportunities for valued occupations and a variation of occupations that contributes to health for older people. However, how work may contribute to occupational engagement among older people also in a long-term perspective are scarcely studied.</p> <p>Aims: The overall aim of the thesis was to deepen the knowledge about engagement in occupations among people from the age of 55 to very old age.</p> <p>Methods: Cross sectional and longitudinal cohort designs were used in this thesis. Studies I and II were based on a purposeful selection of participants from three different work domains: construction and technical companies and community elderly care sector (n=24, Study I; n=26, Study II). In Study III respondents from the Scania Public Health Cohort age 55 and over working at least 10 h/week at baseline and not working at follow-up were included (n=1098). Study IV is based on a strategically selection of participants from ENABLE- AGE Survey study, all beyond age 80 (n=21). Data was collected through focus groups (Studies I- II), individual interviews (Studies II and IV), and a postal questionnaire (Study III).</p> <p>Results: The findings showed that work was considered important and valuable especially with regard to how challenging work tasks were, the possibilities for inclusion in a team of colleagues and the chances for better personal finances (Study I). Organizational factors such as possibilities to influence work tasks, working time and skills development supports the willingness for an extended working life (Study I). Based on values and personal meaning of occupations the participants in Study II had changed their occupational pattern for a more harmonious mix of occupations which contributed to experience of occupational balance. Multivariate logistic regression in Study III showed that jobs with high control, seem to predict high social participation, also after cessation of employment. The results also suggest that high social participation during working life is a predictor of high social participation in a long-term perspective (Study III). A wish to keep on doing as before was evident in Study IV but personal as well as environmental barriers made it difficult especially social participation. Much work in working life without time for leisure seemed to lead to few interest also in very old age.</p> <p>Conclusions: A supportive work environment with possibilities for employees to participate in decision making is beneficial also after retirement. A sustainable working life is a prerequisite for a higher retirement age and may support people to work at least until retirement age and maybe even longer.</p>		
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A life with and without work

Pia Hovbrandt



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Man blir lite andfådd men man får mycket bättre utsikt”
(Ingrid Bergman).*

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The thesis at a glance

Older people's occupations. A life with and without work.

Study I	Prerequisites and driving forces behind an extended working life among older workers.
Aim	To describe incentives behind an extended working life among people over age 65.
Result	Amongst all, the participants expressed a feeling of a strengthened identity by being challenged and having the opportunity to manage working tasks. Work was considered important and valuable especially with regard to how challenging work tasks were, the possibilities for inclusion in a team of colleagues and the chances for better personal finances, which was important for some. However, there were also feelings of exclusions due to age when some participants had been excluded from meetings, health check-ups, or personal development at work.
Conclusion	The finding showed the actual reasons behind an extended working life among older workers. Organizational factors such as abilities to influence work tasks, working time and possibilities for skills development supports the willingness for an extended working life.
Study II	Occupational balance as described by older workers beyond the age of 65.
Aim	To describe occupational balance among older workers beyond age 65.
Result	An extended working life contributed to the participants' occupational balance. Supports from managers, and abilities to influence work tasks as well as work time also contributed to occupational balance. A harmonious mix of occupations was closely related to values and personal meaning of occupations. The participants changed their occupational pattern to get a more harmonious mix of occupations.
Conclusion	An extended working life might enable people to achieve occupational balance and promoting active and healthy ageing.
Study III	Psychosocial working conditions and social participation in a long-term perspective. A 10-year follow-up study.
Aim	To investigate the associations between psychosocial working conditions, and social participation in a long-term perspective. Specific study questions were: to investigate differences in social participation among working people with different psychosocial working conditions at baseline and between baseline and 10-year follow-up. An additional aim was to investigate if psychosocial working conditions were associated with social participation at baseline and follow-up, respectively
Result	The level of social participation varied by job type. Jobs with high decision latitude, as in active and relaxed jobs, seem to predict high social participation, also after cessation of employment. Besides that, the results suggest that high social participation during working life is a predictor of high social participation in a long-term perspective.
Conclusion	Good working conditions can support high social participation in a long term perspective. A supportive work environment with possibilities for employees to participate in decision making i.e. high control, is beneficial also after retirement, with regard to social participation.
Study IV	Very old people's experience of occupational performance outside the home: Possibilities and limitations.
Aim	To describe how very old people experience occupational performance outside the home.
Result	Referring to everyday occupations the participants described how they continued to do what they had done before, but functional decline made it more difficult to overcome environmental barriers. They also described how they sometimes could put functional limitations aside and use their utmost capacity to reach their goals but then in a narrower context.
Conclusion	Very old people's occupational engagement outside the home requires an age-friendly environment and possibilities for social participation.

List of publications

This thesis is based on the following studies referred to by their Roman numerals:

- I. Hovbrandt, P., Håkansson, C., Albin, M., Carlsson, G., & Nilsson, K. (2017). Older workers prerequisites and driving forces behind an extended working life. *Scandinavian Journal of Occupational Therapy*, published online 28 November, 2017.
- II. Hovbrandt, P., Carlsson, G., Nilsson, K., Albin, M., & Håkansson, C. Occupational balance as described by older workers beyond the age of 65. Submitted
- III. Hovbrandt, P., Östergren, P-O., Canivet, C., Albin, M., Nilsson, K., Carlsson, G., & Håkansson, C. Psychosocial working conditions and social participation. A 10-year follow-up of Swedish workers. In manuscript
- IV. Hovbrandt, P., Fridlund, B., & Carlsson, G. (2007). Very old people's experience of occupational performance outside the home: possibilities and limitations. *Scandinavian Journal of Occupational Therapy*, 14, (2), 77-89.

Definitions of some main concepts

Activity is culturally defined and understandable by the general public such as cooking, play or work. An activity does not include any experience by a person in contrast to the term occupation i.e. an event subjectively experienced by an individual (Pierce, 2001).

Life-course perspective on occupation represents the persons' occupational repertoire during life (Davis & Polatajko, 2014; Persson, Erlandsson, Eklund, & Iwarsson, 2001). Through life there are a consistent change of occurrence and frequency of self-care, work, and leisure. In this thesis life-course perspective is captured by focusing on occupations in different periods of life between 55 years of age and very old age (80+).

Occupation is commonly referred to as gainful employment or paid work among the general public. In this thesis, occupation means engagement in doing things that are meaningful for the individual, and refers to the ordinary things people do on everyday basis such as self-care, work and leisure (Hinojosa, Kramer, & Brasic Royeen, 2017).

Occupational balance refers to a subjective experience on the amount, the variation and the meaningfulness of occupations (Wagman, Håkansson, & Björklund, 2012).

Occupational engagement concerns the doing of meaningful occupations, tasks, and roles through complex interactions between the person and environment (Townsend & Polatajko, 2007). In this thesis occupational engagement is interchangeable with occupational performance.

Old and very old age. People in the age of 65-79 are considered as old, and people over 80 years of age are considered to be very old (Baltes & Smith, 1999).

Older worker is defined as someone aged 65 and beyond who is still working (Staudinger, Finkelstein, Calvo, Sivaramakrishnan, 2016).

Psychosocial working conditions refer to the interaction between psychological and social factors in the work environment (Theorell, 2012).

Social participation concerns engagement in occupations that enable shared, meaningful social connections among family, friends, colleagues or communities of people. The settings can be the physical, social, cultural and virtual environment (Kennedy & Lynch, 2016).

Working life refers to the professional life ranging from 15-65 years of age (EU-OSHA, Cedefop, Eurofond, & EIGE, 2017). However, when focusing on working people in this thesis they are between 55-76 years of age. An extended working life in this thesis is considered as working after 65 years of age.

Preface

When I first began as a PhD student in 2003, I was involved in two research projects. The project ‘Let’s go for a walk’ was an intervention project focusing on older people and their local environment (Ståhl, Carlsson, Hovbrandt, & Iwarsson, 2008). The ENABLE AGE Project was a major cross-national, interdisciplinary project including very old people living in five European countries (Sweden, the United Kingdom, Germany, Latvia and Hungary) focusing on the home environment as a determinant for autonomy, participation and well-being in very old age (Iwarsson et al., 2007). My involvement in these projects resulted in the licentiate thesis “Getting about outside home – Very old people’s experiences” (Hovbrandt, 2006). In 2014, I had an opportunity to join the project “Enabling participation, health and well-being of ageing workers: towards a sustainable and inclusive working life” (Sustainable work and ageing workers, 2015). In this project, I saw a possibility to deepen the knowledge about some of the findings from my previous study: “Very old peoples’ experience of occupational performance outside home – Possibilities and limitations”, which is included in this thesis as well (Paper IV). Even if it was not the main finding, the study indicated a relationship between working life and engagement in occupations in later life. That is, spending a lot of time at work, and work characteristics as well, may spill over, and thus may have an impact on interests and possibilities for leisure and especially social participation in old age. Thus, it would be valuable to deepen the knowledge about the contribution of work on other occupations and occupational balance, also in a long-term perspective.

Setting the scene

The demographic changes involving population ageing and a rapidly growing share of very old people in the population make it important to optimize opportunities for valued occupations and a variation of occupations that contributes to health for older people. The definition of old and very old age is not really clear, and it could be useful to distinguish between the third, approximately between 65-79 years, and the fourth age, 80 years and older (Baltes & Smith, 1999; Laslett, 1991) in this thesis called very old people. The third age is characterized by relatively good health and independence and effective strategies to handle gains and losses due to functional decline. The fourth age though, is characterized of presence of functional decline and also less adaptivity to handle decline in functional capacity. Furthermore, in most developed countries an age of 65 and above has been applied to define older people, which is mainly associated with the retirement age and life beyond working age (EU OSHA et al., 2017; World Health Organisation [WHO], 2002). Some inconsistencies could also be found in definitions used to designate older workers. In EU statistics and research related to working life, older workers are often defined as 55 years and older (EU-OSHA, et al., 2017; Fridriksson et al., 2017). In other

definitions workers between 55-64 years are defined as older workers and senior workers are those in the age of 65-74 (Anxo, Ericson, Herbert, & Rönmar, 2017). In this thesis, the older worker is defined as someone aged 65 and beyond who is still working, a definition that has been used in previous research (Staudinger et al., 2016).

In policy documents, the concept of “healthy ageing” (WHO, 2017^a; Public Health Agency of Sweden, 2018) - the need for actions to enable older people to remain a resource to their families, communities and economies - is emphasized. This means opportunities for older people to actively take part in society and enjoy an independent life with a good quality of life without being discriminated due to age (The Public Health Agency of Sweden, 2017). Healthy ageing concerns several determinants such as social, physical environment, personal factors, health and social services, and behavioral factors (WHO, 2015). Since ageing is a lifelong process, WHO (2017^b) specifically emphasizes the importance of having a life-course perspective on ageing. The adult life course could be divided into three periods in life: (1) preparation for work (including education), (2) work, and (3) retirement (Henretta, 2002). This thesis reflects the life course perspective in the work and retirement periods with a specific focus on occupational engagement.

The core assumption within occupational therapy as well as in occupational science is that engagement in occupations that are valued, necessary and desired by individuals contribute to health and well-being (Christiansen & Townsend, 2014; Wilcock & Hocking, 2015). Findings from empirical studies among older people on relationships between occupation and health support this assumption (Clark et al., 2012; Jackson, Carlson, Mandel, Zemke, Clark, 1998; Zingmark, Nilsson, Fischer, & Lindholm, 2016). However, older people are a heterogeneous group with different individual capacities, prerequisites and desires, and it is important to avoid ageism and a stereotyped picture of the group (Eriksson, Lilja, Jonsson, Petersson, & Tatzer, 2015). Instead, older people should be considered as a resource with capabilities that contribute to both their personal development and health, that also support a sustainable society (Wolverson & Hunt, 2015) and the labour market (EU-OSHA et al., 2017). One statement often made with regard to ageing according to an increasingly aged population is that older people have to extend their working life because there will be an increasing pressure on the health and social care system. That is, the number of people of working age in relation to retired people will fall and fewer people will have to fund the non-working population (Christensen, Doblhammer, Rau, & Vaupel, 2009). The trend of working beyond retirement age has increased, but a large proportion of the European population still retires before the statutory retirement age (Ilmarinen, 2012; Nilsson, Östergren, Kadefors, & Albin, 2016). To ensure the welfare state there is a need for more people to work longer. However, social policies such as a raising of the statutory retirement age in order to support active ageing and extended working life will not benefit all,

especially not the less educated, and those with a low pension rate (Hofäcker, Hess, & Naumann, 2015). For people with functional decline, it probably will be even harder to work longer without support from both the labour market and social services policy. The promotion of healthy ageing must be based on what older people really want to do, be, and become, in working life, within families and communities.

Introduction

People's choice of occupations depends on personal conditions, interests and experiences, together with environmental demands, possibilities and requirements (Kielhofner, 2008). Occupation refers to something that is done in a specific place and at a specific time, and could be done by more than one person. The use, and organization of time in occupations during a day, week, month and year are building up an individual pattern of occupations that consistently change during life (Persson, et al., 2001). What older people value and choose to be engaged in often depends on what they have done in the past (Atchley, 1989; Nilsson, Lundgren, & Liliequist, 2012), and during life there is a constant change and development, based on individual experiences from one's occupations, and from environmental changes and demands (Davis & Polatajko, 2014). This thesis is focusing on people of working age (55 years) to very old age (80+) and a life course perspective is taken into consideration, in terms of the occupational changes due to the transactional relationship between person, environment and occupation.

Occupational engagement

Occupational engagement is a fundamental concept within occupational therapy and occupational science, and refers to a transactional relationship between the person, the environment and the occupation, i.e. involvement in occupations that are meaningful for the individual (Townsend & Polatajko, 2007). Occupational engagement can also be described in the terms of doing, being, belonging, and becoming, focusing on the meaningful aspects of occupations (Wilcock & Hocking, 2015). Doing refers to the myriad of variations of occupations according to, for example, where people live, feelings about their doings, interests, capacities, education, life stages, and social and financial status. Doing also refers to the mental, physical, social, restful, active, obligatory, self-chosen, and paid or unpaid occupations. Being is especially a personal aspect of occupation referring to contemplations about the self and about past, present and future pleasures and achievements. Belonging refers to the different social contexts people are parts of and the meaning individuals give to being a part of families, friends and colleagues in the work environment or as a member of an organization. Becoming is about

human development, transformation and about achieving potential based on what people have done during their lives (Wilcock & Hocking, 2015). However, it is not possible to explain a typical pattern of occupations in relation to a specific age, although work is most evident in the adulthood in the Western world, whereas for retired people there is more time for leisure. Instead of making generalizations about occupational engagement in specific age groups, it seems that the variation and change of the occupational pattern could be referred to social structures such as retirement and not to ageing per se. Based on surveys on time use, people working beyond 65 years of age showed the same occupational patterns as the younger people (Chilvers, Corr, & Singlehurst, 2010). Most of the variation in the occupational pattern among older people comes from the decrease of working time. By using time-use diaries in a sample of older people over 70 years of age it was found that most time was spent in care for oneself occupations, followed by reflections and recreation, home-keeping, food preparing, and transportation (Björklund, Gard, Lilja, & Erlandsson, 2013). However, occurrence and frequency of self-care, work, and leisure during life, from childhood, to adulthood and old age constantly change (Davis & Polatajko, 2014; Persson, et al., 2001).

To better understand the role of occupation during ageing the Continuity Theory of Ageing (Atchley, 1989) could be applicable. This theory explains the adaptive strategy for change in the aging process which means that people strive to maintain a structure in daily life promoted by personal preferences and social behavior based on earlier experiences. The Continuity Theory of Ageing also proposes that social characteristics are stable during the life span and older people who can continue their habits, occupations and social relationships have the most successful ageing. In a longitudinal study focusing on age-related changes in leisure, findings showed that leisure engagement earlier in life was a strong predictor of leisure engagement in later life (Agahi, Ahacic, & Parker, 2006), which lends support to the Continuity Theory of Ageing. This thesis is focusing on individual experiences and changes in occupational engagement in different periods of life, from working life into very old age.

The person, environment, and occupation relationship

There are personal, environmental and occupational factors that are prerequisites for engagement in occupations.

The personal component can be referred to as an individual, a group, organization or community, and reflects the human being with a variety of roles and physical, cognitive, and psychological capacities, as well as skills, knowledge and experience. Functional limitations due to physical and cognitive decline increases with ageing (Beydoun et al., 2014; Welmer, Kåreholt, Angleman, Rydwick., & Fratiglioni, 2012) which may impact on older people's possibilities for occupational engagement.

Even so, it has been reported that the extent of the most difficult functional limitations has decreased, and the extent of the less severe has increased (WHO, 2015). Furthermore, even with increased life expectancy, there is little evidence that people in very old age currently experiences their later years better than the very old did 30 years ago (Chatterji, Byles, Cutler, Seeman, & Verdes, 2015).

The environmental component is defined as the cultural, institutional, physical, social and the virtual environment (Baptiste, 2017). Depending on the environmental demands, the environment can either enable or constrain occupational engagement. WHO (2017^b) describes that age-friendly environments for health, can protect people from threats to health, and enable them to expand their capabilities and develop self-reliance in health. This means that it is of vital concern that political strategies support environments in the physical and social environment where people live, including their work environments, as well as in traffic and recreation environments (WHO, 2017^b). A health supportive work environment means for example an awareness of risks in the physical environment, as well as in the psychosocial environment (Brown, Carr, Fleischmann, Xue, & Stansfeld, 2018).

In environmental psychology and gerontology (Lawton, 1986; Lawton & Nahemow, 1973), the person-environment (P-E) relationship is emphasized in order to explain the influence of environment on human behaviour, i.e. the P-E-fit. According to the ecological model (Lawton & Nahemow, 1973) further developed in the Ecological Model of Ageing (Scheidt & Norris-Baker, 2003), a good fit between the ability of the person and the demands of the environment is important if occupational engagement is to be successfully performed.

Occupations are often categorized according to the purpose of the doing such as self-care, work and leisure. Work is typically characterized as occupations with a production-focused purpose to earn money, i.e. paid employment, in order to provide for one self or for one's family (Persson et al., 2001). Work is central to people's occupational pattern and contributes to structure and routines (Holmes, 2007), social interaction and may also define the individual in terms of status and identity (Feather, 1997). Work could also be referred to an unpaid and productive occupation where education, voluntary work and household occupations are also included (Kielhofner, 2008; Persson et al., 2001). Further, work is a multidimensional phenomenon with different meaning in different cultures (Cronin-Davis & Wolverson, 2015). In this thesis, work refers to paid employment among workers in a Swedish context.

With ageing, the physically demanding occupations and specifically occupations outside home have been shown to decrease and the more sedentary occupations such as watching television, listening to music and social participation at home increase (Albert, Bear-Lehman, & Burkhardt, 2009; Eriksson, et al., 2011; Nilsson, Nyqvist, Gustavsson, & Nygård, 2015). However, there can be a mismatch between older

peoples' personal goals and possibilities for increased occupational engagement. For example, it was found that many of older peoples' goals in a rehabilitation process were related to social, leisure, outdoor activities, and possibilities for participating in society (Hjelle, Tuntland, Forland, & Alvsvåg, 2017). However, in a recent study it was found that occupational therapy interventions was mostly focused on indoor mobility and self-care (Zingmark, Evertsson, & Haak, 2018). Possibilities to get out of home and doing things in a social context is important for life satisfaction and healthy ageing (Klugar et al., 2016) also for very old people (Nilsson et al., 2015). Consequently, it is important to consider what older people really want and need to do and also take older peoples occupational history into consideration.

Occupational balance

A balanced pattern of occupations, which meets the individual's wants and needs and the environmental demands, contributes to health and well-being (Meyer, 1977; Backman, 2004). Although, the concept of balance has been widely used in a variety of disciplines there are an inconsistency and a lack of consensus on the definition (Chang, McDonald, & Burton, 2010; Lipworth, Hooker, & Carter, 2011). Related terms, often used similarly to balance, are *work life balance* (Reece, Davis, & Polatajko, 2009), *life balance* (Matuska & Christiansen, 2009), and *occupational balance* (Wagman et al., 2012). Work life balance could be viewed as an ongoing process in which people strive to achieve the ideal levels of balance, it is a subjective perception of being balanced, dependent on personally unique factors (Reece et al., 2009). However, including *work* may point to that work is the primary factor for balance (Wilcock & Hocking, 2015) and thus work could be recognized as more important than other occupations in daily life. Moving on to *life balance*, this term has been defined as "*an equitable distribution of time across one's actual time-use profile*" (Matuska & Christiansen, 2009, p 66) and the distribution of time should be accordance with the individual's ideal time use. In this definition life balance represents an effective time use with an occupational pattern that meet the individual wants and needs related to health, social relationships, identity and challenge (Matuska & Christiansen, 2009). *Occupational balance* has been defined as experiences of having the right amount and variation of meaningful occupations with different characteristics (Wagman et al, 2012). According to Wagman (2012) life balance and occupational balance could be viewed as two separate concepts where life balance is a broader concept that includes occupational balance. In this thesis, the definition of occupational balance proposed by Wagman and colleagues (2012) is used.

Empirical findings supporting the relationship between occupational balance and health shows that among women of working age there are associations between

occupational balance and experience of satisfaction with life as a whole and no perceived stress (Håkansson, Lissner, Björkelund, & Sonn, 2009). Perceived occupational balance has also been found to be a predictor of good subjective health for working women (Håkansson & Ahlborg Jr, 2010). Further, an imbalance between occupations in daily life, including work (Duxbury, Lyons, & Higgins, 2008), contributes to poorer self-rated health (Leineweber, Baltzer, Magnusson-Hansson, & Westerlund, 2012) and increases risk of stress-related disorders (Håkansson & Ahlborg, 2017).

In order to achieve occupational balance, it has been proposed that there are three indicators: i) a harmonious mix of occupations, ii) abilities and resources, and iii) congruence with values and personal meaning (Eklund et al., 2016). The first indicator, '*a harmonious mix of occupations*' includes the variation and the number of occupations people are engaged in. Having neither too many nor too few occupations and not being engaged in just one occupation, that takes all energy from everything else, was important for occupational balance among working people (Wagman, Björklund, Håkansson, Jacobsson, & Falkmer, 2011). Dual-income parents achieved occupational balance when they could manage life, in terms of both paid work and in family life, and participate in a mix of occupations (Wada, Backman, Forwell, Roth, & Ponzett, 2014). Furthermore, a balance between challenging versus relaxing occupations, occupations with individual meaning versus occupations in a social context, and doing things for one self or for others, have also been shown to be important for the experience of occupational balance (Ludwig, Hattjar, Russel, & Winston, 2007; Stamm et al., 2009). Although, having meaningful caregiving occupations as being a grandfather or grandmother may also cause a threat to a harmonious mix of occupations if care giving disrupt time for other meaningful occupations (Ludwig et al., 2007). Additionally, a harmonious mix of occupations also includes how compulsory and pleasurable occupations are, and the physical, mental, social and restful characteristics of occupation, all based on individual experiences (Wilcock & Hocking, 2015).

The second indicator '*abilities and resources*', refers to the ability to manage occupations people are engaged in, and reflects the assertion that demands should not exceed the personal and environmental resources, i.e. the P-E fit. For example, reduced physical and mental ability may affect occupational balance negatively and resources in the social environment may affect occupational balance positively. Organizational factors such as positive attitudes were associated with occupational balance among parents of working age (Borgh, Eek, Wagman, & Håkansson, 2017).

The third and last indicator of occupational balance concerns the '*congruence with values and personal meaning*' in occupation, meaning that people cannot sustain their occupational balance if their occupational pattern only contains experience of, for example doing. Among women with stress-related disorders, engagement in

meaningful occupations has been shown to be important for occupational balance (Håkansson, Dahlin-Ivanoff, & Sonn, 2006). According to Persson and colleagues (2001) concrete, socio symbolic and self-reward values could also be used in order to explain value and meaning in occupation. Concrete value refers to the more visible outcome of an occupation such as wages, products or improvement of personal abilities and skills. The socio symbolic value can be attributed to the value of being able to participate in a social context at work, in family and among friends. The self-reward value refers to occupations individuals choose to be engaged just because the enjoyment they experience in the occupation. It has been proposed that these dimensions are necessary for experience of meaning in occupation (Persson et al., 2001). In a qualitative study among older people it was found that experience of concrete and socio symbolic value were most frequent and self-rewarding value the least frequent (Björklund, Lilja, Gard, & Erlandsson, 2015).

Very few studies have focused on older people and occupational balance, although some indicate that there is a link between occupational balance and retirement (Jonsson, Borell, & Sadlo, 2000; Pettican & Prior, 2011). In order to achieve occupational balance it was vital to compensate for and replace the positive aspects of work with new occupations and with routines (Jonsson, et al., 2000) and with occupations to challenge, and develop individual capabilities (Pettican & Prior, 2011). In another study among older people who have had a stroke, it was found how they, with adaptive strategies, found new ways for occupational engagement that contributed to their occupational balance (Lund, Mangset, Wyller, & Seen, 2013). Hence, previous research has mostly focused on occupational balance among people younger than 65 years of age and knowledge about occupational balance among older people is lacking (Wagman, Håkansson, & Jonsson, 2015). Since there are no doubts about the importance of occupational balance for health and well-being this knowledge gap should be systematically explored.

Social participation

Further, it seems as social participation after retirement could compensate for the loss of work and the connection with colleagues (Schwingel, Niti, Tang, & Ng, 2009). In a recent study, it was found that social participation after retirement contributed to a sense of meaning in life and had a positive impact on mental health (Shiba, Kondo, Kondo, & Kawachi, 2017). Previous studies showed that social participation in older populations is important for experiences of health and life satisfaction (Adams, Leibbrandt, & Moon, 2011, Adams, Roberts, & Cole, 2011) and contributes to cognitive and physical health (Hughes, Flatt, Fu, Chang, & Ganguli, 2012; Paillard-Borg, Fratiglioni, Xu, Winblad, & Wang, 2012). However, individual barriers such as functional decline due to age can reduce older people's possibilities for social participation (Nilsson et al., 2015).

For very old people it has been stated that access to parks, local shops and good transportations supports social participation and well-being (Dahlin-Ivanoff, Haak, Fänge, Iwarsson, 2007; Nilsson, Löfgren, Fischer, & Bernspång, 2006). To have friends and relatives in the neighbourhood and possibilities for cultural events close to home are related to higher levels of social participation among very old people (Haak, Fänge, Horstmann, & Iwarsson, 2008). According to health benefits, social participation in old age contributes to cognitive and physical health (Hughes et al., 2013; Paillard-Borg et al., 2012) and could also be a way to maintain roles and feelings of being useful to others (Kylén, Schmidt, Iwarsson, Haak, & Ekström, 2017).

Although fairly extensive research has been carried out on retirement transitions, there are still inconsistent findings in terms of whether retirement is good or bad for health (Eibich, 2015; Insler, 2014; Shai, 2018; van der Heide, van Rijn, Robroek, Burdorf, & Proper, 2013). Whether these inconsistent findings have something to do with a loss of meaningful occupation and social inclusion, and if there are any relationship with factors in working life, also in a long term perspective, are an unexplored area.

Working life

Work is understood as an occupation that has the potential to influence health and well-being (Christiansen & Townsend, 2014; Hasselkus, 2011; Yerxa, 1998). Beyond being a means to provide for oneself and one's family, work also contributes to the development of new skills, opportunities to feel valued, identity growth, daily structure and social interactions, and gives opportunities to challenge competence (Holmes, 2007; Matuska & Christiansen, 2009; Wadell & Burton, 2006).

As described above, work is considered important, but work may also result in a low P-E fit. It is a well-known fact that work-related risk factors such as work overload and work injuries have a negative impact on health, also from a long-term perspective. Longitudinal studies suggest that midlife work stressors accumulate and are associated with more musculoskeletal pain and mobility problems (Kulmala et al., 2014; Nilsen et al., 2014; Parker, Andel, Nilsen, & Kåreholt, 2013) and dementia (Sindi et al., 2016) after retirement age. However, there are also findings suggesting that work-related resources such as non-repetitive work tasks, possibilities for development, experiences of meaning at work and influence were found to accumulate over the life course in a 35-year longitudinal study (Hakanen, Bakker, & Jokisaari, 2011). Hence, work-related risk factors as well as resources can have effects on health in a long term perspective but have not yet been investigated in relation to social participation in old age.

Psychosocial work conditions

Psychosocial work conditions refers to the interaction between psychological and social factors in the work environment, i.e. how the employee experiences and responds to the surroundings at work (Theorell, 2012). In the Job Strain Model [JSM], the psychosocial aspects of work proposes four job types: high strain, passive relaxed, and active (Karasek & Theorell, 1990) (Figure 1). These four job types are combinations of high and low levels of psychological job demands and decision latitude. JSM postulates, that high strain jobs (high psychological job demands and low decision latitude) are considered to be stressful jobs and increases the risk of ill health. Passive jobs (low demands combined with low control) may cause a loss of skill and unlearning, and people in passive jobs can perceive even moderate demands as stressful (Karasek & Theorell, 1990). Relaxed jobs (low demands combined with high control) are, theoretically, considered to be the ideal scenario in the work environment (Theorell, 2000). Active jobs combine low demands and high decision latitude, are characterized as challenging, stimulating, and motivating jobs without the negative impact of psychological strain.

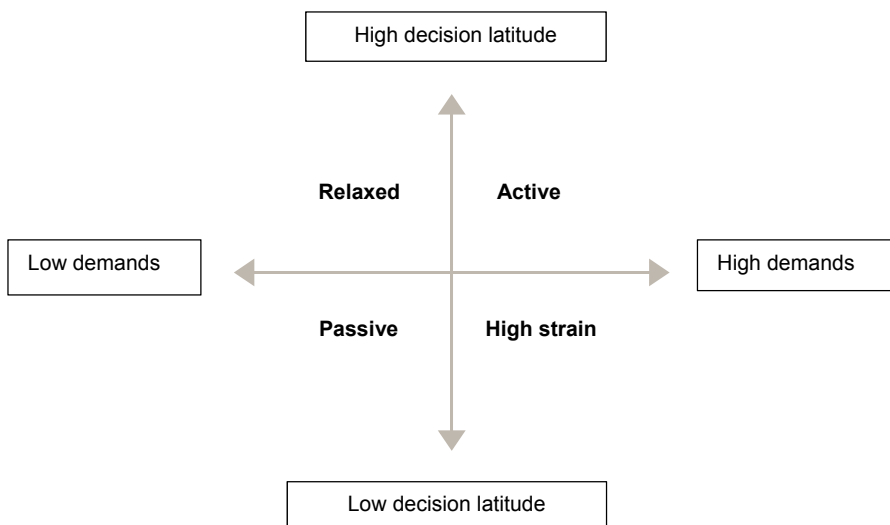


Figure 1 The Job Strain Model. Source Karasek & Teorell, (1990), modified by the author.

Empirical support for the risk of ill health in high strain jobs has been shown in epidemiological studies of e.g. coronary heart disease, stroke, diabetes, depression, and neck and shoulder disorders (Kivimäki et al., 2015; Kraatz, Lang, Kraus, Münster, & Ochsmann, 2013; Madsen et al., 2017). In longitudinal studies with a focus on passive jobs and high strain jobs in late midlife it was found that high strain jobs among women and passive jobs among men were associated with decreased physical functioning 20 years later (Nilsen, Andel, Fritzell, & Kåreholt, 2017). Although with no focus on older people in specific, previous studies have found

associations between active jobs and a more physically active leisure time (Choie et al., 2010; Morassaei & Smith, 2011). Lindström (2006) found that active and relaxed jobs were associated with higher levels of social participation in a one year follow-up study. Active jobs in midlife have been shown to be associated with better cognitive function (Andel, Crowe, Kåreholt, Wastesson, & Parker, (2011) after retirement. However, to the best of my knowledge, very few studies have focused on active and relaxed jobs and possible effects on social participation in a longitudinal perspective.

An extended working life

In Sweden, the statutory retirement age has been 67 years of age since 2000. There is flexibility between 61 and 67 years, and it is possible to work beyond age 67, by agreement with the employer when there is a need for the employee in the work place (Swedish Pension Agency). The average retirement age within the EU is now 61 years of age, which is still several years earlier than the statutory retirement age in many of the European countries (EU-OSHA, et al., 2017). In Sweden, the average retirement age is 64 years for women, and 65 for men (OECD, 2017). Due to the demographic ageing, almost all societies in the Western world are facing an extensive pressure on the pension systems. Thus, pension reforms are taking place in many European countries with restrictions for early retirement and raising the statutory retirement age, in order to activate people to work longer (EU-OSHA, et al., 2017). In Sweden it is decided that the statutory retirement age will be raised to between 64 and 69 (Government Offices of Sweden, 2017).

These reforms had led to an increase of retirement ages as well as employment rates of older workers in Europe (Hofäcker, 2015). However, to only raising the statutory retirement age does not ensure that people actually can or want to work longer. In order to work longer, the complexity and multidimensional aspects behind an extended working life need to be considered, as described in the theoretical model “The sustainable working life for all ages model” (swAge model) (Nilsson, 2016^{a, b}). The swAge model structure four age concepts (biological, chronological, social, and mental age) with nine factors affecting work life participation into four considerations for a decision to work or withdraw from working life. The nine factors and four considerations in the swAge-model shows that an individuals’: Biological age associates with: 1) diagnoses and self-rated health; 2) physical work environment; 3) mental work environment; 4) work time and work pace. The first consideration for a decision to work or withdraw from working life is the individual’s health and wellbeing, as related to the physical and mental work environment, work schedule, work pace and the possibility of recovering is good enough, or if there might be better opportunities outside work, as a pensioner. Chronological age associates with 5) personal finances and the second consideration for a decision to work or withdraw from working life is the individual’s personal

financial situation at work or their personal financial opportunities as a pensioner. Social age associates with: 6) family and leisure, synchronising with a partner's retirement; 7) social inclusion in the work group, along with attitudes from managers and others at work. The third consideration for a decision to work or withdraw from working life is on the individual's opportunities for social inclusion and social participation at work, versus social participation with family and friends in leisure activities as pensioner. Mental age associates with: 8) meaningfulness and satisfaction within work tasks and profession; 9) knowledge, education, skills, and development. The fourth consideration for decision to work or withdraw from working life is on the individual's opportunities for meaningful and self-rewarding occupations at work or as a pensioner.

Previous studies have shown that incentives for working longer are strongly related to good working conditions and that work strain is an important risk factor for poor work ability also in a long-time perspective (Prakash et al., 2017; von Bonsdorff et al., 2016). Consequently, a change of work arrangements, working time and redesign of individual work tasks could increase opportunities for an extended working life (Ilmarinen, 2012; Midtsundstad & Nielsen, 2013). These kinds of arrangements may also contribute to a better occupational balance and a sustainable working life. Furthermore, working life is facing, and needs to accommodate, increasing disparities in health status among workers in the same age group. The challenge is especially evident, but not enough researched, at the workplace level (Hasselhorn & Apt, 2015). Heavy or strenuous physical work is especially critical, since physical strength decreases already from mid-life but also because most chronic diseases will affect the physical work ability more than the mental work ability (Swedish Work Environment Authority, 2016). Moreover, heavy and strenuous work is more common among those with low education and low income, especially in working domains with more women (Albin, Toomingas, & Bodin, 2016). There are findings of rising social inequalities with rising retirement age when low educated are forced to work longer in order to get enough pension and avoid poverty as a pensioner (Hofäcker, Hess, & Naumann, 2015). These findings introduce a structural tendency towards a mismatch between work demands, the individual capabilities and gender differences in the age of exit from the labour market. On the other hand, it seems as work tasks with cognitive challenges contributes to cognitive abilities while ageing (Smart, Gow, & Deary, 2014). To better comprehend how an extended working life may contribute to active and healthy ageing a focus on the positive effects from work is justified (Staudinger et al., 2016).

Rationale

With an ageing population there will be a financial pressure on the health and social systems. Especially, the group of people over 80 years will increase in the coming years. Consequently, to meet the demands when we live longer, it is of vital importance to find predictors for healthy and active ageing. Since occupational engagement contributes to health and well-being for older people, possibilities to keep on doing valuable occupations through life, also when you are very old are crucial.

Work is an occupation that takes up most of our time in adulthood and contributes to both social integration and self-esteem. By raising retirement age the demands of an ageing population can be met and maybe encourage more people to stay in work life longer. However, a higher retirement age will be difficult to implement unless people are able to actually work longer. Also, it is vital to take into account the different conditions among older people. Probably, there has to be a variety of retirement options in order to support older peoples' possibilities for occupational engagement.

Previous research has found how work related factors can affect occupational engagement and health negatively also in a long term perspective. Hence, more research is desirable on factors that in a positive way affect people's will and opportunities to work longer. Especially such knowledge should be valuable among those who actually have extended their working lives i.e. older workers, which has been scarce in previous research. This thesis adds to the knowledge on how work may contribute to occupational engagement and occupational balance for older people also in a long-term perspective.

Aims of the thesis

The overall aim of the thesis was to deepen the knowledge about engagement in occupations among people from the age of 55 to very old age.

Specific aims

Study I

To describe incentives behind an extended working life among people over the age of 65.

Study II

To describe occupational balance among older workers beyond the age of 65.

Study III

To investigate the associations between psychosocial working conditions and social participation in a long-term perspective.

Study IV

To describe how very old people experience occupational performance outside the home.

Material and Methods

An overview of the design, selection of participants and methods for the four studies included in the present thesis are described in Table I.

Table I
Design, selection of participants and methodology in Studies I-IV

Study	Design	Participants	Data collection	Data analyses
I	Cross-sectional	Purposeful selection of participants from three different work domains: construction and technical companies and community elderly care sector, n=24	Focus group	Constant comparative analytic framework
II	Cross-sectional	Participants from Study I, supplemented with two participants from the elderly care sector, n=26	Focus group and individual interviews	Directed content analysis
III	Longitudinal cohort	Respondents from the Scania Public Health Cohort with respondents age 55 and over, working at least 10 h/week at baseline and not working at follow-up, n=1098	Postal survey	Logistic regression
IV	Cross-sectional	Strategically selection of participants from ENABLE-AGE Survey study, all beyond age 80, n=21	Semi-structured individual interviews	Contextual analysis

Study design

This thesis is based on four studies, three qualitative and one quantitative, in which cross sectional and longitudinal cohort design have been used. The selection of research designs was based on the issue at target, and on the aims of the four different studies. The qualitative studies explored incentives behind an extended working life (Study I), and occupational balance (Study II) from older workers' perspectives, and experiences of occupational performance outside the home from very old peoples' perspectives (Study IV). Study III, with a quantitative and longitudinal cohort design, was guided by findings from Studies I-II according to

the participants' incentives for an extended working life and occupational balance, and possible associations with psychosocial working conditions.

Study context and samples

The geographical study context of this thesis is located in southern Sweden and the characteristics of the participants included in this thesis are presented in Table 2.

Table 2
Demography of participants in Studies I-IV

		Studies I-II		Study III	Study IV
		I	II		
Sample, N/n		24	26	1098	21
Age, Md (range)		67 (66-71)		58 (55-76)	86 (82-92)
Sex					
	Male	19	19	563	8
	Female	5	7	535	13
Civil status					
	Cohabit	18	19	894	
	Single	6	7	188	21

Studies I and II

Study I-II are based on data from three different work domains: construction and technical companies and the municipal elderly care sector in four municipalities of different sizes in the county of Scania. For both Study, I and Study II the selection criteria were aged 65 and over and still working, i.e. older workers. In total, 24 participants were included in Study I and 26 in Study II, all aged 66-71.

Study III

In Study III data from “The Scania Public Health Survey”, was used. This survey has been sent out to residents in Scania every fourth year since 1999/2000 in order to examine the health and living conditions among the residents. The Scania Public Health Survey cover a variety of aspects such as socioeconomic status, family situation, health related behaviour, self -rated health, and social relationship, The first questionnaire was sent out to a non-proportional age-, gender-, and geographical area-stratified sample of 24 922 persons born between 1919 and 1981 living in Scania. After mail and telephone reminders the final response rate was 58% (13 604 persons) (Carlsson, Merlo, Lindström, Östergren, & Lithman, 2006). In 2005 and 2010 a follow-up questionnaire was sent out to all respondents from 2000, forming the longitudinal Scania Public Health Cohort.

For study III a subsample of respondents from 2000 and 2010 is used. The inclusion criteria for Study III, were respondents aged 55 and older who still worked at least 10 hours per week at baseline in 2000 and who did not work at the follow-up in 2010. The selection resulted in a number of 1098 respondents with a mean age of 58. A flowchart of the study sample is shown in Figure 1.

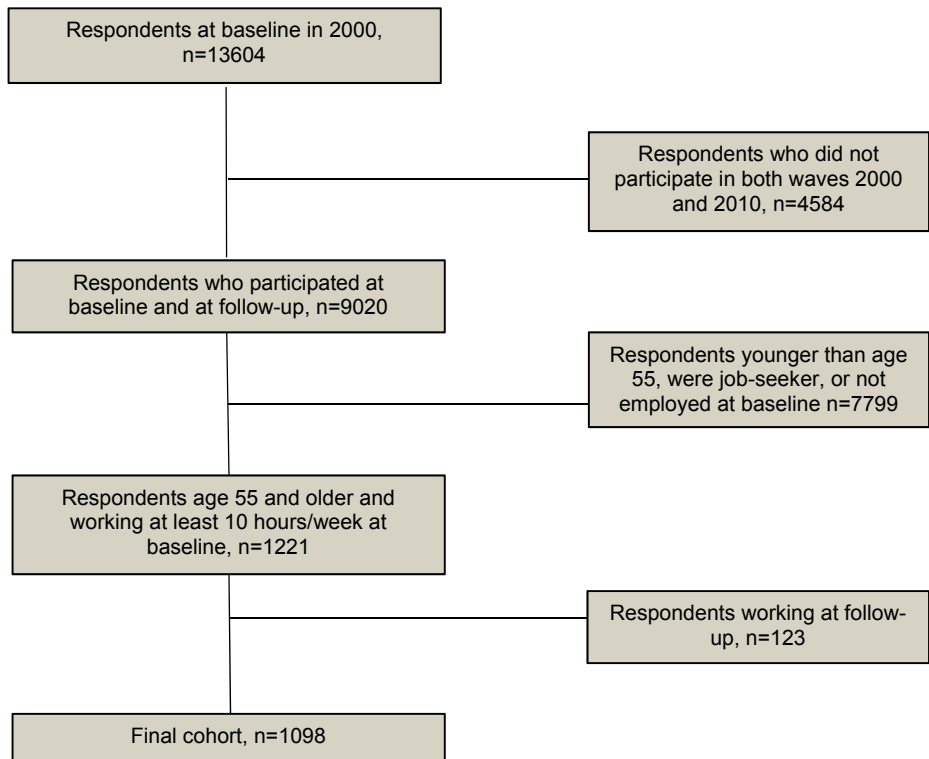


Figure 2. Flow chart of the study sample

Study IV

Study IV is based on data collected with a sub-sample of very old persons living in ordinary housing participating in the Swedish ENABLE-AGE Survey study (Iwarsson et al., 2007). This study took place in three municipalities of different sizes in the counties of Scania and Halland that encompassed both urban and rural areas.

In Study IV, the inclusion criterion was participation in at least one occupation outside the home. The sample was strategically selected from a database in the Swedish ENABLE-AGE Survey study (Iwarsson et al., 2007) in accordance with the phenomenographic approach (Fridlund & Hilding, 2000). In order to give as great variation as possible with regard to age, sex, functional limitations, place of residence, dependence on mobility devices and type of housing, 28 very old people over the age of 80 were selected. Seven of them were excluded due to death, disease or having moved to another place, and the sample resulted in 21 very old people living alone, who still showed a variation in terms of the selected criteria.

Data collection

Different methods for data collection were used in order to meet the specific aims of the studies in this thesis. The methods were chosen to be able to illuminate depth among the participants' experiences and also to study associations in a larger sample.

Studies I and II

Six focus groups were conducted between March and August 2015. General information was given to the participants concerning the specific topic that had been decided on in advance, and the questions focused on "an extended working life". The discussions were conducted by using a semi-structured interview guide and started with an opening question: "Why have you decided to work beyond the age of 65?" Following the guidelines proposed by Krueger and Casey (2009), a moderator and an assistant moderator led the discussions in the focus groups. The moderator primarily focused on listening closely, directing the discussion, deciding when more information was needed, and when to move on. At the end of the discussions, the moderator asked the assistant if there were any additional questions or follow-up topics of interest.

Since very few women and very few people from the health care sector participated in the focus groups, the data collection for Study II was supplemented with two individual interviews conducted in June and September 2016. The interviews were

based on the same interview guide, but the interviewer (PH) continued the interviews with questions concerning managing occupations in daily life in order to more deeply capture other occupations outside work. In all interviews, questions for exploring, specifying and summarising the discussion were also added.

Study III

Study III was based on the Scania Public Health Survey conducted in 1999/2000 and 2010. Besides questions about demographic characteristics such as age, sex and marital status, questions about social participation, psychosocial working conditions, financial stress, physical activity, family situation and perceived health were also included.

Social participation

Social participation (during the past year) describes how actively a person has taken part in activities in society. The social participation variable consisted of 13 items: participation in a study circle/course at work, a study circle/course during leisure time, a union meeting, a meeting of other organization, theatre/cinema, arts exhibitions, church, sports events, had written a letter to the editor of a newspaper/magazine, demonstration of any kind, visited a public event (night club, dance or similar), larger family gathering, attended a private party. Items were dichotomized (yes/no) and summed up, and if three or less were indicated, the social participation of that person was classified as low, and if four or more were indicated, the social participation of that person was classified as high (Lindström, Merlo, & Östergren, 2002). This question has been used in Sweden since the 1960s and has been reported to have high validity (Hanson, Östergren, Elmståhl, Isacson, & Ranstam, 1997).

Psychosocial working conditions

Psychosocial working conditions were measured with a Swedish translation of the Job Content Questionnaire [JCQ] (Karasek et al., 1998). The JCQ is based on the Job Strain Model [JSM] and was further developed with a focus on psychological demands and control (Karasek & Theorell, 1990). High psychological demands refer to intensive or rapid work where the employee may experience conflicting demands. Job control refers to the degree of decision-making authority and skill discretion of the employee, i.e. decision latitude. The JCQ items consist of 14 statements where respondents were asked to either agree or disagree on a four-point Likert scale (1-4). Following the demand-control model, four different job types were defined by combining psychological demands and decision latitude. *High strain* job is a combination of high psychological demands and low decision latitude, a *relaxed* job is a combination of low psychological demands and high decision latitude, an *active* job is a combination of high psychological demands and high

decision latitude and a *passive* job is a combination of low psychological demands and low decision latitude.

Financial stress

Financial stress was captured with the question “How often during the past 12 months have you had difficulties paying your bills (rent, electricity, telephone, mortgage, insurance, etc.)?” with the response alternatives “Every month”, “About half of the months”, “A few times” and “Never”. The answer was considered as “Financial stress” if the respondent had answered “Every month” or “About half of the months”, and as “No financial stress” if the answer was “A few times” or “Never”.

Family situation

To capture the family situation the question “Do you have any old or sick relatives that you need to help, refer to or care for?” with the response alternatives yes or no.

Physical activity

Physical activity was measured with a single question asking about leisure time activity (household work excluded), with the response alternatives: “Mostly sedentary leisure time activities”, “Moderate leisure time physical activities”, “Regular exercise”, “Hard or competitive sports/training regularly or several times a week”. Answers were dichotomized, as “Physically active” (last three alternatives) vs. “Not physically active” (the first alternative).

Self-rated health

Self-rated health was measured with the question “In general, how do you rate your current health status?”, with five response alternatives “Excellent”, “Good”, “Fair”, “Bad” and “Very bad” (Kaplan & Camacho, 1983; Schnittker & Bacak, 2014; Ware, Kosinski, & Keller, 1996). This single question is considered to be the most reliable and valid item estimate of the self-rated health status (Björner et al., 1996). Answers were dichotomized as “Good self-rated health” if the respondent had answered “Excellent” and “Good”, and “Poor self-rated health” if the answer was “Fair”, “Bad” and “Very bad” in either of the two waves (2000 and 2010).

Study IV

The interviews were conducted from March to June 2004 and were carried out in the participants’ homes. In order to capture very old people’s experiences of their occupational performance outside the home, semi-structured interviews concerned themes such as person, environment, and occupation. The initial question regarding the participants’ occupations outside the home was: “where do you normally go when you leave home?” followed by questions like: “Can you tell me what it is you

like in those occupations?”, “Can you describe other occupations that you would like to do?”, “Can you describe the environment where you move around?”, “How do you experience this environment?”, and “How do you think that your body affects what you normally do?”

Procedure

Studies I and II

The managers in the selected work domains, two medium sized companies and four municipalities in the south of Sweden, received both written and oral information about the study and were asked if they wanted the workplace to take part in the study. The managers asked potential participants, i.e. older workers, if they would like to participate in focus groups interviews and the authors then contacted those who were interested to arrange a time for the interviews. For Study II, the managers within in the elderly care sector in two different municipalities were contacted by mail by the interviewer (PH), and were asked if there were any older workers who wanted to participate in individual interviews. The two women who were interested were then contacted by the interviewer to schedule the interviews.

Study III

The respondents from baseline in 2000 and follow-up in 2010 were informed about the study in a daily newspaper, *Sydsvenska Dagbladet*, in November 2016. If the respondents did not want to participate they were asked to contact the research leader at Lund University by telephone or e-mail, and all their data would be excluded from the study. None of the respondents contacted the research leader and the study started in June 2017.

Study IV

The participants were informed by letter about the study and asked whether they were willing to participate. The interviewer (PH) then called the participants who agreed to participate and gave further information about the study and made arrangements for the time and place of the interviews.

Data analysis

Study I

Data was analysed using a constant comparative analytical framework (Krueger & Casey, 2009), the objective was to identify patterns in the data in order to discover relationships between ideas among the participants. In accordance with the study aim, the discussions comprised reasoning about the participants' perceptions and motives behind an extended working life. The first step in the analysis was to carefully listen to all audiotapes and read the transcribed discussions several times in order to become familiar with each focus group interview. In this first step, notes, meaning units, and coding quotes that corresponded to the aim of the study were taken. The second step involved grouping notes, meaning units and similar quotes into categories that were then grouped into themes. The key task in this second step was to compare data segments in order to find similarities and differences. In the third step, the categories were arranged according to their relationships with each other. The analysis was performed in an iterative process of constantly moving back and forth between analysis and the raw interview data. In order to strengthen trustworthiness (Elo et al., 2014; Lincoln & Guba, 1985), consensus on grouping and categorization was achieved through mutual discussion among all authors.

Study II

Directed content analysis is a suitable choice when there is an existing theory or prior research of a phenomenon that would benefit from further description (Assarroudi, Nabavi, Armat, Ebadi, Vaismoradi, 2018; Hsie & Shannon, 2005). The analysis started by constructing a categorization matrix (Assarroudi et al., 2018) with the predetermined categories "Harmonious mix of occupations", "Abilities and resources" and "Congruence with values and personal meaning", based on the indicators of occupational balance presented by Eklund and colleagues (2016). The second step in the analysis was profound listening to all audiotapes and reading all transcripts carefully. In the third step, the coding began, which meant line-by-line extraction of meaning units, and all text that appeared to describe occupational balance was highlighted in the transcripts. Thereafter, a process began by stating one of the predefined categories and then identifying each quote that could be labelled with the category. In this step, it was also possible to identify quotes and potential unidentified categories that were absent from the original categories.

The first author (PH), was primarily responsible for conducting the analysis that was performed in an iterative process of constantly moving back and forth between the meaning units, categories and transcripts. The categories, meaning units and examples of quotes for each category were presented to the other authors. After

independently reviewing the transcripts and chosen quotations for accuracy, they provided feedback to the first author. Thereafter, in order to strengthen trustworthiness (Elo et al., 2014; Lincoln & Guba, 1985), consensus on the analysis was achieved through mutual discussion between all authors.

Study III

The Kruskal Wallis test was used to detect differences between the four job types (high strain, relaxed, active and passive) in social participation rates at baseline, and McNemars test was used to detect within-groups changes in social participation rates between baseline and follow-up ten years later. Thereafter, multivariate logistic regression analyses were performed to test if any of the job types were associated with high social participation at baseline and follow-up. We firstly tested whether the potential confounders, self-rated health, sex, marital status, caring for a sick relative, education, financial stress, and physical activity, were associated with social participation at follow-up. Model 1 thus included adjustment for the confounders, which were associated with ($p < 0.10$) social participation in 2010, i.e. self-rated health, caring for a sick relative, education, and physical activity. Model 2 was the same as Model 1, but also adjusted for social participation in 2000 in order to adjust for differences in the baseline status of the outcome variable. Model 3 included adjustment for all potential confounders, i.e. as in Model 1 (self-rated health, caring for a sick relative, education, and physical activity), and additionally gender, marital status, and financial stress. Model 4 was the same as Model 3, but also adjusted for social participation in 2000. The passive job type with the lowest social participation rates was selected as the reference category. The level of statistical significance was set at $p < 0.05$. The statistical analyses were conducted with SPSS, version 24 (IBM Corp., Armonk, NY).

Study IV

The analysis for Study IV was performed according to the phenomenographic approach called contextual analysis (Svensson, 1997). The analysis started with reading all transcripts several times to ensure familiarity with their content in detail. The interviews were then reduced and the most significant statements from each interview, with the study aim in focus, from each interview were selected. This was followed by a thorough reading of all the statements in order to find those reflecting how the participants experienced their occupations outside the home. The statements were compared in order to find variations and agreements. A phenomenon has two aspects: structural and referential (Marton & Booth, 1997). The structural aspect are the parts that people discern from the surrounding world. The referential aspects, meaning the overall significance of the phenomenon, are made up of the structural aspects. By analysing the internal relations of the

statements, they were subsequently put together to form the structural and referential aspects. The two co-authors read all transcripts and statements separately, and then compared the statements together with the first author (PH). Finally, the authors reached agreement on the categorization of referential and structural aspects.

Ethical considerations

All studies in this thesis were conducted in accordance with the Declaration of Helsinki, put forward by the World Medical Association (2009). The project “Enabling participation, health and well-being of ageing workers: towards a sustainable and inclusive working life” (Studies I-II) were approved by the Regional Ethics Review Board in Lund (Dnr 2013/722) as well as Study III (Dnr 2016/720). The ENABLE AGE Project (Study IV) was approved by the Ethics Committee, Faculty of Medicine, Lund University (Dnr LU 324, 2002). In the qualitative studies (I, II and IV), prior to each interview, the participants were clearly informed both orally and in writing that participation was voluntary and that it was possible to withdraw at any time. Before inclusion in the qualitative studies (I, II and IV), written informed consent was obtained from all participants. All interviews took place in familiar locations that were chosen by the participants. For Studies I and II this was the participants’ workplaces, and for Study IV it was the participants’ homes. The participants were further informed that the recorded and transcribed interviews would be treated as confidential. For Study III, the application of the rules and regulations applicable to the handling of this type of sensitive data in epidemiological research (application of confidentiality rules and the Swedish Personal Data Act) and by the invited individuals was reported in the written documentation attached to the questionnaire. In addition, the invited individuals were informed of a named contact, with telephone or e-mail contact details, in case they wanted more information. All results from the quantitative analyses are reported at the group level so that individuals cannot be identified.

Results

The overall aim of the thesis was to deepen the knowledge about engagement in occupations among people from the age of 55 to very old age. The results focus on engagement in occupations among older workers and people in very old age, as well as associations between psychosocial working conditions and social participation in a long-term perspective. Finally, the results focus on engagement in occupations outside the home in very old age.

An extended working life

The participants in studies I and II were all older workers, and their incentives behind an extended working life will first be presented, followed by their perceptions of occupational balance.

In general, the participants described how important and joyful their work was for them and the findings revealed two themes: *'Prerequisites'* and *'Driving forces'*. Within the theme of prerequisites, concerning considerations on decisions to extend working life, two categories were derived, *'dealing with own health'* and *'agreements'*. The participants would not even consider working beyond the age of 65 if these prerequisites were not met. Even if there were some health problems, they were not bothersome and did not impinge on the ability to manage work tasks. The other category in this theme, *'agreements'*, concerned the participants' ability to manage work, family life, and other occupations. Among the participants with a partner, and also for those living alone, it was evident that it could be better to work longer because retirement may accelerate ageing. Concerning the *'Driving forces'*, three categories were derived: *'to be challenged'*, *'to be included'*, and *'To have better personal finances'*. Among these categories, the most important was *'to be challenged'*, and if this was not met, the positive aspects from the other categories could be ignored and the participants would instead consider retirement. In particular, stimulating and slightly tricky work tasks and a joyful work experience were very strong motivating aspects. This also contributed to the participants' self-fulfilment. *'To be included'* concerned social aspects at work, and a positive attitude from managers and work colleagues contributed to a positive experience of feeling valued in the work place and of being an important part of the organisation.

However, the participants also expressed some disappointments in regard to not being as included as they had previously been, and due to their age, they were no longer invited to competence development seminars and health check-ups as they had been previously. The last category, '*To have better personal finances*', concerned the possibilities of getting more money when retirement comes. Even if there were different opinions about the financial incentives for working longer, the participants agreed that in some respects, they still worked for the money. However, a risk of rising social inequity arose when the participants were forced to extend their working life due to a difficult financial situation as a pensioner.

Occupational balance among older workers

Perceptions about daily life involving work and other occupations were congruent with the predefined categories of occupational balance: *a harmonious mix of occupations, abilities and resources*, and *congruence with values and personal meaning*. Although work was still very important and meaningful, other occupations began to take place in the occupational pattern among the older workers. Work contributed to occupational balance and, with too much work earlier in life with few opportunities for other meaningful occupations, the participants now prioritised differently. They were seeking for more balance between their daily occupations and the variation of occupations had a character of being challenging, had social aspects, gave satisfaction and was meaningful for them.

Concerning the category *a harmonious mix of occupations*, the participants described their eagerness to have a greater variation of occupations and thus a more harmonic mix of occupations than they used to have. There was a variation in the occupational pattern among the participants and, even if work still took up a lot of time, they seemed quite satisfied with their mix of occupations.

According to *abilities and resources*, the older workers had to deal with the presence of functional decline when managing occupations they were engaged in. They tried to prepare for a future decline in functional ability due to ageing, and they had found ways to practice their skills.

The category *congruence with values and personal meaning* concerned the participants' thoughts about their life as a whole, and they reflected on what life will be like in the future. They were conscious of their approaching retirement and tried to find strategies to prepare for a life as a retired person. Besides the working role, they mentioned the meaningful roles of being a friend and a parent, and the role of being a grandmother or grandfather was seen as being particularly meaningful. Having these valuable roles appears to be crucial since ending working life generated feelings of grief and resembled a divorce. If there were no other occupations that were as meaningful as work, and the participants were not allowed to work beyond the age of 67, changing profession could be an option.

Psychosocial working conditions and variations in social participation

In Study III workers aged 55 and above at baseline were studied and the results showed that social participation varied by job type (active, relaxed, passive and high strain jobs). At baseline, high social participation was most common among respondents with active jobs (91%), followed by 89% among those with relaxed jobs, 82% among respondents with high strain jobs, and 78% with passive jobs. Regarding the within-group evolution in social participation levels between baseline (year 2000) and follow-up (year 2010), all decreased (p-levels varying between 0.004 and <0.001).

Psychosocial working conditions with high decision latitude, as in active and relaxed jobs, predicted high social participation, including after cessation of employment.

High job control predicted high social participation in the crude model and the fully adjusted model 3, with statistically significant higher rates for respondents with relaxed jobs and active jobs (Table 3). This pattern remained at the 10-year follow-up, although it was no longer statistically significant for the jobs with both high control and high demands, i.e. for respondents with active jobs.

Having a relaxed job predicted high social participation with an OR of 1.56 (1.01-2.02). In the same model, good self-rated health OR 1.94 (1.42-2.66), high education OR 2.98 (2.11-4.21), being physically active OR 1.78 (1.15-2.77), and helping a sick relative OR 1.43 (1.01-2.02) predicted high social participation at follow-up (not shown in tables).

When social participation at baseline was included (in models 2 and 4), none of the high/low demand-control jobs were statistically significant for high social participation at follow-up, but the effect estimates changed only marginally (Table 3). More specifically, having high social participation at baseline predicted high social participation at follow-up with an OR of 6.11 (3.99-9.37) (not shown in tables).

Table 3.

Associations between job type, as defined by the demand-control model, and high social participation at baseline and at the 10-year follow up, respectively (n=982).

	Relaxed OR (95%CI)		Active OR (95%CI)		Highstrain OR (95%CI)	
	2000	2010	2000	2010	2000	2010
Crude model	2.26 (1.37-3.74)	2.31 (1.55-3.45)	2.82 (1.69-4.70)	2.12 (1.45-3.09)	1.35 (0.86-2.12)	1.03 (0.72-1.49)
Model 1	1.53 (0.92-2.63)	1.56 (1.01-2.02)	2.00 (1.16-3.45)	1.49 (0.99-2.26)	1.41 (0.86-2.29)	1.06 (0.71-1.58)
Model 2		1.42 (0.89-2.26)		1.29 (0.83-2.00)		0.96 (0.63-1.47)
Model 3	1.78 (1.01-3.15)	1.71 (1.08-2.68)	1.97 (1.12-3.47)	1.51 (0.99-2.31)	1.25 (0.76-2.05)	0.96 (0.64-1.44)
Model 4		1.50 (0.93-2.42)		1.32 (0.84-2.70)		0.90 (0.58-1.38)

Notes. Passive job was set as the reference category,

Model 1 = adjusted for self-rated health, caring for sick relative, education, physical activity

Model 2 = Model 1 + adjusted for social participation at baseline

Model 3 = Model 1 + adjusted for sex, marital status, financial stress

Model 4 = Model 3 + adjusted for social participation at baseline

Engagement in occupations outside the home in very old age

Among very old participants the value of being engaged in occupations was based on personal conditions, interests and experiences, together with environmental possibilities (Study IV). The findings in Study IV showed a variation in the experience of occupations outside the home described in three referential aspects: *keeping on doing as before, drawing on available resources, and living in constrained circumstances*. Although the occupational arena was minimized the participants referred to everyday occupations and they continued to do what they had done before based on previous experiences and interests. However, some participants also described how their strongest interest had been their work, resulting in very few interests in old age. Little spare time, with no time for leisure, due to a lot of work in working life also had effects in very old age. The participants' functional decline made it more difficult to overcome environmental barriers, but sometimes they could put functional limitations aside and use their full capacity to reach their goals. To be in a social context was described as important:

...it's very nice, you meet different people who...what shall I say, I don't mix with them but I meet them there and I think it's very nice. It means a great deal.

Also, when the participants had fewer occupations outside the home, their occupational history was obvious and became a reason for their current occupational engagement. One participant described:

In the summer I sit in a summer chair...beside the dovecote. They're letter pigeons. Yes, indeed. That has been my life. Ever since I was a lad. Yes, I sit there a great deal. And the dog beside me...

Discussion

The overarching aim of the thesis was to deepen the knowledge about engagement in occupations among people from the age of 55 to very old age. The findings contribute to knowledge of the incentives behind an extended working life among older workers and how an extended working life contributed to occupational balance. Psychosocial work characteristics could have long term effects on social participation, and social participation was found to be very important for very old people but could be hindered by personal as well as environmental factors. The findings also showed that both older workers and very old people in different ways were striving for occupational balance in relation to the three indicators of occupational balance; a harmonious mix of occupations, abilities and resources and congruence with values and personal meaning.

Engagement in a harmonious mix of occupations

As the participants were close to their retirement, they knew that they were going to lose one of their most valuable occupations, namely work. However, due to high work load previous in life they had not have time and opportunities for so much more than work. Now, the participants were stricter about their working hours and those who worked full-time had decided not to work overtime anymore, and others had reduced their working hours (Studies I-II). The participants now strived for a more harmonious mix of occupations that were perhaps related to their routines and structure, which have been shown to be a part of occupational balance (Jonsson, 2014). Similarly, the importance of having neither too many, nor too few occupations, as well as avoiding occupations that take away all their energy from everything else for experience of occupational balance has been found in previous research (Wagman et al., 2011). The findings indicate that there were a need among the participants to replace work with other occupations. This may be explained by the fact that older people want more flexibility in order to allow a better balance between work and other occupations (Lissenburgh & Smeaton, 2003).

Additionally, the results are supported by findings in recent research among older workers (Jonsson, 2000; Pettican & Prior, 2011) in which retirees achieved new routines after retirement by choosing occupations to challenge and develop

individual capabilities. In Study I it was obvious how stimulating and challenging work tasks were a strong motivational factor for an extending working life. An extended working life with challenging work tasks may possibly also contribute to occupational balance if there are no such challenging occupations outside work. That is, a mix of both challenging and relaxing occupations have been described as important for achieving occupational balance (Eklund et al., 2016). Thus, as long as older people do not have other challenging occupations with possibilities for personal development an extended working life could be an option as the findings in Study I showed.

Furthermore, the findings in Study I as well as in Study II showed how important it was to be included in a social context which is important for achieving occupational balance (Eklund et al., 2016; Stamm et al., 2009). To be included could also be related to the concept of belonging referring to the meaning people give to the social context they are parts of (Wilcock & Hocking, 2015; Rebeiro et al., 2001). In both Study I and II the importance of relations with colleagues at work was evident but in Study II, the participants' descriptions of their needs to spend more time with family and friends were also evident. Social inclusion in the work environment in terms of relationships with managers, workmates, clients, and customers has previously been found to be important for an extended working life (Nilsson, 2016^b, 2017).

Moreover, the importance of being useful to others i.e. altruism, is another aspect of occupational balance (Eklund et al., 2016; Stamm et al., 2009). This was explained by the participants in Study I when they described their opportunities to be a mentor for their younger colleagues. Transfer of knowledge between younger and older workers has been shown as important in working life (Nilsson & Nilsson, 2017) and may also contribute to a harmonious mix of occupations for older workers. Previous research among older people has found that altruism was one of the most important motivational factor for working (Knight et al., 2007). In another study it was found that older people who frequently felt they were useful to others, had a lower mortality rate and experienced a decrease in disabilities (Gruenewald, Karlamangla, Greendale, Singer, & Seeman, 2007).

Abilities and resources for occupational engagement

The participants in Studies I-II described themselves as rather healthy i.e. with good personal abilities and resources. The presence of functional decline described by the participants neither prevented them from managing work tasks nor any other occupations and were therefore not barriers for occupational engagement. In study IV, however, the functional decline due to ageing and a lack of resources was

evident among the participants. Even if some of the participants were “drawing on available resources” the functional decline was a crucial barrier for occupational engagement especially social participation. Although, with the mismatch in the person-environment relationship in Study IV it seems as the participants strived for experience of occupational balance when they used their utmost capacity for occupational engagement. However, occupational balance was not in focus among the very old participants in Study IV, but this should be of interest in future research.

Among other resources for occupational engagement good working conditions and organizational resources contributed to occupational balance according to the findings in Study II. Further, work schedule, work pace and the opportunity for recovering can be a crucial for an extended working life (Nilsson, 2016c, 2017) and this is maybe true also for achieving occupational balance. Further, organizational factors such as opportunities for independence, skills development and reduced work time contribute to willingness to extend working life (Anxo et al., 2017) and also to occupational balance (Borgh et al., 2017; Österholm, Björk, & Håkansson, 2013; Syrek, Apostel, & Antoni, 2013). In a recent published study based on the Whitehall II study (Fleischmann, Carr, Stansfeld, Xue, & Head, 2017) it was found that good psychosocial working conditions could directly be related to reduced risk of work exit among chronically ill workers. Maybe, this is true also for other vulnerable groups with low education, low income and high work-load since they already today do not have the opportunity to work until retirement age (Fleishmann et al., 2017; Hess, 2017).

There are rising social inequities in which less educated workers may be forced to extend their working lives while the more highly educated work longer on a more voluntarily basis. Besides the fact that socioeconomic factors such as high education and high income are resources for self-reported health (Lundberg, 2017) these factors also bring the best opportunities for an extended working life. Previous studies have shown that the well-educated person, i.e. a post graduate, often in a highly skilled job that is less physically demanding, is particularly more likely to work beyond retirement age (Hofäcker & Naumann, 2015). Additionally, it seems as people with good health, as the participants in Studies I and II, have the best opportunities for an extended working life and occupational engagement. Further, social disparities in health are increasing in Europe, including Sweden, mainly due to a weaker improvement in health among those with low education or low income, as compared to those with high education/income. This applies both to life expectancy and to healthy life expectancy (Albin, Gustavsson, Kjellberg, & Theorell, 2017; Lundberg, 2017). As long as only those with good health or those with low job demands can actually continue to work longer it is unlikely that delaying the retirement age will be successful. Instead, an increasing external pressure to work longer – e. g. for financial reasons, as in Study I – may push manual workers to remain in jobs with physical demands that are too high, possibly

accelerating a decline in health (Albin et al., 2017). Findings from previous research indicated that among older workers i.e. beyond 65 years of age financial reasons were not related to an extended working life (Anxo et al., 2017) which is supported by the finding from Study I where financial reasons was not the main driving force for an extended working life among the older workers. Since previous studies have confirmed the social inequities, for future research striving for heterogeneous samples is crucial in order to avoid a healthy and also wealthy worker effect in the findings. The effect of organizational factors and good working conditions, especially among the vulnerable groups, deserve consideration in future research. Mainly because, older people should be recognized with the potential to be productive and valuable for the society. Furthermore, from an occupational justice perspective all people should have access to the chosen or necessary occupations despite age, disability, gender or culture (Stadnyk, Townsend, & Wilcock, 2014).

Engagement in occupations with values and personal meaning

Value and meaning in occupational engagement as referred to by the participants in the qualitative studies could be described in the terms doing, being, belonging and becoming (Wilcock and Hocking, 2015). According to doing, the participants were more conscious of choices between different occupations in order to get a more harmonious mix of occupation mostly based on what they experienced as meaningful (Study II). Moreover, the change in their occupational pattern also contributed to occupational balance. These findings could also be related to being as described by Wilcock and Hocking (2015) as a personal aspect of occupation referring to contemplations about the self and about the past, present, and future pleasures and achievements. The participants in Study II as well as in Study IV, reflected on their whole life, and their occupational history was evident in their descriptions. Especially in Study II the participants described how important it was for them to take care of life, to do things to fulfil dreams, and to shape the rest of their lives on an individual and meaningful basis. This relates to human development, transformation and about achieving potential based on what people have done during their lives, i.e. becoming (Wilcock & Hocking, 2015).

Furthermore, the value dimensions named as concrete, socio symbolic and self-reward values could also be used in order to explain value and meaning in occupation. To be challenged with interesting work tasks and having the possibility to get some more money in Study I are examples of concrete values from occupation. The socio symbolic value i.e. the value of being able to participate in a social context at work, in family and among friends which was found to be valuable

for the participants in Studies I-II as well as in Study IV. Moreover, the participant valued their family life, and prioritized doing occupations with and for their families which could be related to belonging (Wilcock & Hocking, 2015) and also the socio symbolic value in occupation as described by Persson and colleagues (2001). Anyway, the different social contexts people are part of and the meaning individuals give to being a part of families, a colleague in the work environment or a member of an organization has previous found to be important for subjective health (Erlandsson, Eklund, Persson, 2011) and for an extended working life (Nilsson, 2016^c; Nilsson, 2017). In Study I, as well as in Study II, it was evident that as long as work was meaningful and joyful for the participants they will keep on working. Particularly, experience of work as joyful was a driving force for an extended working life in Study I, giving the participants self-reward value. Similar findings were shown in a recent study where a stimulating work and a strong individual engagement in work were found to be the most important factors behind an extended working life among older workers (Anxo et al., 2017). Amongst all, the participants in Study II chose occupations to be engaged that were particularly meaningful for them and by that they also get a harmonious mix of occupations and occupational balance. Their choice may justify the assumption that occupational balance is closely related to experience of values and personal meaning (Håkansson et al., 2006).

Social participation in old age

At the same time as interactions with colleagues was found to be important for an extended working life among the participants in Study I they also realised that, as retirees they probably will not continue to have contact with their work colleagues. However, a lot of work previous in life had led to less social participation besides the one with workmates (Studies I-II) also in a long term perspective (Studies III-IV). Nevertheless, retirement could be seen as a stage in life with a normal change in which the social network becomes smaller (Cornwell, Laumann, & Schumm, 2008). In Study IV the findings indicated that high work load had negative effect on social participation and reduced time for leisure also in a long term perspective. The long term effects of psychosocial working conditions were further investigated in Study III, a focus that has been scarce in previous research. The results showed that high job control predicted high social participation at base line as well as at follow up. The results in Study III also showed that having high social participation at baseline predicted high social participation at follow-up with an OR of 6.11 (3.99-9.37). In a previous longitudinal study it was found that supporting social participation had positive effects on mental health and reduced negative effects of retirement for men (Shiba et al., 2017). Consequently, it seems as possibilities for

social participation during working life also have positive effects in old age as a pensioner. The results give some evidence for the Continuity Theory of Ageing (Atchley, 1989) describing that older people are motivated to use their past experiences that worked well, to shape their future life course. Job control have also shown associations with active leisure (Choi et al., 2010; Lindström, 2006; Morassaei & Smith, 2011). Thus, it is likely that the respondents in Study III during their working life were more prone for social participation and by that had positive experiences, which contributed to a higher degree of social participation also in late life.

Social participation was measured by counting the number of social activities the respondents reported in accordance with the instructions for the question (Hanson et al., 1997). However, continuity is not only about what older people do but also and, maybe more so, about the meaning behind their participation (Breheny & Griffiths, 2017). Consequently, referring the result from the quantitative analysis in Study III to the Continuity Theory of Ageing must be done with some caution. Future research with qualitative or mixed methods might be appropriate to capture how social participation might be related to the Continuity Theory of Ageing. In such research, it might also be possible that other arenas for social participation will appear for example in the virtual environment (Kennedy & Lynch, 2016) and digital technology which could be new opportunities for older people's occupational engagement (Fischl, Asaba, & Nilsson, 2017).

In Study IV when the participants, based on their occupational history and interests, wanted to keep on doing the same as before may also be explained by the Continuity Theory of Ageing. This does not mean that it is important to do exactly the same thing in the same way, but is more about how older people conceptualizes their past as a great resource that influences adaptations to new situations (Atchley, 1989). This means that older people can more easily adapt to a new situation such as retirement if there are possibilities for social participation and other valuable occupations than work during working life. Furthermore, although the participants in study IV described how both environmental and personal factors were barriers for social participation they experienced satisfaction as long as they could get outdoors and to some extent take part in the social life around them, such as sitting on a bench and observing others. Similar findings concerning the contribution of the outdoor environment has been shown in other studies (Bengtsson & Carlsson, 2013) which lend support to the need of considering how the physical environment can support occupational engagement for older people.

Older people in working life

Besides the descriptions of how work contributed to the participants development and occupational balance the importance of being included in the social context at

work was also expressed. However, the participants in Study I, also expressed some disappointments in relation to not being as included as they had been previously, due to their age. That is, they were no longer invited to competence development seminars and health check-ups as they had been previously. Ageism in the workplace has previously been found in connection with competence development and training for new technologies (Furunes & Mykletun, 2010; Furunes, Mykletun, Solem, 2006). Ageism can decrease feelings of competence and participation in the workplace as well as in society at large. Further, ageism favours the privilege and right to work for younger workers over that of older workers (Laliberte Rudman, 2015). Ageism does not support older people's right to choose work as a meaningful occupation and does not support healthy ageing. Consequently, one can argue that ageism at work can lead to feelings of exclusion and in order to support possibilities for an extended working life, and it is therefore crucial for managers to act against ageism. The responsibility for combating ageism at work is mainly a matter for managers and is of vital concern (Eriksson et al., 2015; Harris, Krygsman, Wachenko, & Laliberte Rudman, 2017). Older people should be considered as a resource with capabilities that contribute to both their personal development and health, that will also support a sustainable working life and society (Cronin-Davis & Wolverson, 2015).

Since work is considered as meaningful it should be fruitful to take into account findings from the 80-90-100 schedule (Mykletun & Furunes, 2011) which could be an option for a sustainable working life. The 80-90-100 schedule allows the employees to work 80% of employment, receiving 90% salary, and earning 100% of pension towards the statutory retirement programme. When investigating the outcome of this schedule among women working in the community health care and in the aged of 61-63 the findings showed that all women were very pleased of the possibilities to take part of the schedule (Hovbrandt, 2016). Before entering the 80-90-100 all women explained that they could not manage to work until retirement age of 65. On the follow-up after two years their intention for retirement had changed and it was possible to work until 65 years of age and for some of the even longer. The possibility of recovery was perceived as the greatest profit of the schedule which made it possible for social participation and other occupations to a higher degree and by that also a support for occupational balance.

Other opportunities to stay in working life could be through bridge employment (Alcover, 2017; Bennett, Beehr, Lepisto, 2016) and career reinvention (Arbesman, 2015). Bridge employment and career reinvention support financial security, and strengthen interactions with others, but it may also be a way to achieve occupational balance for older people. Thus, society should provide opportunities for continued participation and recognize older people as a resource in the labour market (Wolverson & Hunt, 2015).

Methodological considerations

Qualitative studies I, II and IV

The trustworthiness of qualitative research can be linked to four criteria: credibility, dependability, confirmability and transferability (Elo et al., 2014; Lincoln & Guba, 1985). Credibility refers to the most appropriate method for data collection. In studies I-II, focus group discussions were suitable for acquiring knowledge about perceptions and beliefs regarding the specific topic (Krueger & Casey, 2009; Then, Rankin, & Ali, 2014). In Study IV, a phenomenographic approach was used which was suitable for the purpose of the study on how very old people experienced engagement in occupations outside the home. The focus was mainly on how the participants perceived the world and the variation among them, not how the world is per se, and the findings were descriptions of the variation in their experiences, in accordance with Marton and Booth (1997). Study IV was conducted already in 2007 and since then steps that should be taken in analysis have developed in order to further clarify the process in phenomenography (Åkerlind, 2012). In all the qualitative studies in this thesis credibility as well as dependability i.e. how the findings are consistent with the raw data were further taken into account by using analyst triangulation where the co-authors, all with experience in qualitative research, were involved in the analysis process (Lincoln & Guba, 1985).

In terms of dependability, i.e. the stability of data over time and under different conditions, the data collection in Study II lasted for over a year, which may affect the dependability of the study (Graneheim & Lundman, 2004). However, there were no change in any regulations in relations to retirement rules during the data collection which could possibly affect thoughts about an extended working life i.e. the stability over time.

Confirmability was ensured in all studies, by describing the sample, data collection and the analysis as rigorously as possible and by using quotations that were connected to all main findings and widely representative of the sample (Elo et al., 2014). To further ensure confirmability, the moderator in the focus groups (Studies I and II) and the interviewer in the individual interviews (Studies II and IV) obtained both direct and repeated affirmations during the interviews.

Transferability concerns how well the findings could be generalized to other settings or groups (Graneheim & Lundman, 2004). In studies I-II, more than half the sample consisted of project leaders, which is a highly selective group, in regard to both education and their relatively high wages, and the findings may not be transferable to other groups. Thus, further studies are needed in other working areas with a more diverse sample. In Study IV, the participants were very old people who were still

engaged in occupations outside the home, and their answers reflect experiences from those who could possibly have experience of the phenomenon in question.

Using the same qualitative data for Studies I-II could be a limitation (Irwin & Winterton, 2012), but since the data analysis differed with a inductive analysis in Study I and both inductive and deductive analysis in Study II, this should not be seen as a limitation. A limitation in using directed content analysis could be the risk of more supporting than non-supporting findings when following the predefined categories from previous research (Hsie & Shannon, 2005). However, in Study II the predefined categories did not guide the data collection, instead they were used in the analysis process.

Study III

The strength of Study III are the longitudinal design in a national large population with respondents from midlife to old age, and the use of an established psychosocial work condition model, i.e. JSM (Karasek et al., 1998). However, some limitations should be noted. First, we did not study any differences between men and women, which should be done in future research, especially since previous research has found gender inequalities (Albin et al., 2017). Second, counting the number of activities is just one aspect of social participation, and does not say anything about the experience of engagement. However, it made it possible to statistically analyse the associations between psychosocial working conditions and social participation, and how psychosocial work conditions, i.e. job types, predict social participation. The question to measure social participation has been used in previous studies (Ahnquist, Wamala, & Lindström, 2012; Granbom, Kristensson, & Sandberg, 2017; Lindström et al., 2002; Lindström, Moghaddassi, Merlo, 2003; Lindström, 2006; Mattisson, Håkansson, & Jakobsson, 2015). The reliability and validity of the social participation variable indicated an acceptable reliability with a kappa coefficient of 0.70, and the construct validity using Cronbach's alpha was 0.61 (Hanson et al., 1997). A threat to the internal validity (Kazdin, 2003) may be that the alternatives for activities included in the question may not reflect activities that are common today, for example social participation in the virtual environment (Kennedy & Lynch, 2016) is not included. Furthermore, another important issue is the possible causality between the variables health and social participation (Sirven & Debrand, 2008). It may be that healthier people are more prone to social participation or the reversed causality that social participation has positive effects on health, or that both social participation and health influence each other (Sirven & Debrand, 2013). Using self-reported data could be a limitation since there are no possibilities to check for the validity of answers. However, the Scania Public Health Survey provided representative data (Carlsson et al., 2006) on the study population of interest. Moreover, with the variety of information in the survey, it was possible to

assess different aspects of people's life, such as social participation, psychosocial working conditions, financial stress, physical activity, family situation and perceived health that were included in Study III. Additionally, when using survey data with large population samples, it may not be possible to consider in-depth information on specific topics, and the variables may therefore lack precision.

Conclusions

The following conclusions are drawn from the results in this thesis.

- Organizational factors such as possibilities to influence work tasks, working time and skills development supports the willingness for an extended working life.
- Besides the economic contribution of an extended working life this may also contribute to occupational balance for older people.
- A supportive work environment with possibilities for employees to participate in decision making i.e. high control, is beneficial also after retirement, with regard to social participation.
- It is important to take into account the different conditions among older people, and consequently there must be a variety of retirement options in order to support also the most vulnerable groups with health problems, those working in jobs with high strain and those with low education.
- Actions for health promotion and to prevent work injuries are crucial to ensure a sustainable working life for all.
- Very old people's occupational engagement outside the home requires an age-friendly environment with possibilities for social participation.

Further research

Further studies are needed to explain associations between work-related factors and the meaning in social participation for older people for more fully understand the transactional relationship between person, environment and occupation.

The findings in this thesis points to the importance of longitudinal research to capture factors that contribute to occupational engagement for older people. Further studies on how trajectories of psychosocial working conditions during working life may predict health in late life are needed.

Further research is required to understand better how to promote occupational balance during working life. Especially research in a life course perspective in order to capture possible relationships between occupational balance and psychosocial working conditions should be valuable.

The rising gender inequalities puts forward a need to take into account a gender perspective in future research.

Considering the possible healthy worker effect in findings, future research should be based on a diverse sample from different work domains.

Swedish summary/Svensk sammanfattning

Bakgrund

De demografiska förändringarna med en allt äldre befolkning där särskilt andelen av de mycket gamla ökar innebär att det är viktigt att optimera möjligheterna för äldre att delta i aktiviteter med variation och som är meningsfulla och bidrar till hälsa och välbefinnande. I policydokument betonas begreppet ”hälsosamt åldrande” (WHO, 2017a; Folkhälsomyndigheten, 2018), vilket innebär att det behövs åtgärder för att äldre ska kunna vara en resurs i samhället. Vidare innebär detta att äldre ska ha möjlighet leva ett självständigt liv med god livskvalitet utan att bli diskriminerad på grund av ålder. Eftersom åldrande är en livslång process betonar WHO (2015) vikten av att ha ett livslångt perspektiv på åldrande.

En viktig antagande inom arbetsterapi och aktivitetsvetenskap är att engagemang i aktiviteter som är meningsfulla, nödvändiga och önskade bidrar till hälsa och välbefinnande (Christiansen & Townsend, 2014; Wilcock & Hocking, 2015). Resultat från empiriska studier med äldre personer avseende relationen mellan aktivitet och hälsa bekräftar detta antagande (Clark et al., 2012; Jackson, Carlson, Mandel, Zemke, & Clark, 1998; Zingmark, Nilsson, Fischer, & Lindholm, 2016). Dock måste påtalas att äldre är en heterogen grupp med olika individuella förmågor, förutsättningar, önskningar och behov. Därför är det viktigt att undvika en stereotyp bild av gruppen äldre (Eriksson, Lilja, Jonsson, Petersson, & Tatzer, 2015). Istället bör äldre betraktas som en resurs med kapacitet som kan bidra till både egen personlig utveckling och hälsa, vilket då även bidrar till ett hållbart samhälle (Wolverson & Hunt, 2015) och även kan vara ett bidrag på arbetsmarknaden (EU-OSHA, Cedefop, Eurofond, & EIGE, 2017).

Ett centralt begrepp inom arbetsterapi och aktivitetsvetenskap är aktivitetsbalans vilket innebär en upplevelse av att rätt mängd och variation av meningsfulla aktiviteter med olika egenskaper (Wagman, Håkansson, & Björklund, 2012). Bland äldre personer har det visat sig att det finns ett samband mellan pensionering och upplevelse av aktivitetsbalans (Jonsson, Borell, & Sadlo, 2000; Pettican & Prior, 2011). Dock finns det avsevärt mycket mer forskning om aktivitetsbalans bland personer yngre än 65 år, vilket påtalar behovet av mer kunskap kring hur äldre personer upplever sin aktivitetsbalans.

Arbete är en aktivitet som upptar den mesta tiden i vuxenlivet och arbete bidrar till en inkomst, skapar en struktur i vardagen och bidrar även till självförverkligande och kan vara en viktig aktivitet även för äldre personer (Wolverson & Hunt, 2015). Antalet personer i arbetsför ålder kommer att minska i förhållande till antalet pensionärer vilket i sin tur innebär att allt färre personer att behöva finansiera den icke arbetande befolkningen (Christensen, Doblhammer, Rau, & Vaupel, 2009). Därför behöver arbetslivet förlängas och trenden att arbeta även efter pensionsåldern har ökat, även om det fortfarande är många som måste avsluta sitt arbetsliv tidigare (Ilmarinen, 2012; Nilsson, Östergren, Kadefors, & Albin, 2016). I Sverige kommer den lagstadgade pensionsåldern fram till år 2026 successivt att stiga till 64 år, vilket då blir den lägsta åldern för att ta ut allmän pension (Pensionsmyndigheten, 2018). En högre pensionsålder kan dock vara svårt att genomföra eftersom personer med låg utbildning, tunga arbeten, hälsoproblem och personer med funktionsnedsättningar redan idag har svårt arbeta fram till pensionsåldern (Hofäcker, Hess, & Naumann, 2015). Förmodligen kommer det att behövas flera olika pensionsmöjligheter för att stödja även personer i dessa mer utsatta grupper.

Tidigare forskning har visat att arbetsrelaterade faktorer kan påverka arbetsförmåga och hälsa negativt, även i ett långsiktigt perspektiv (Kulmala et al., 2014; Nilsen et al., 2014; Parker, Andel, Nilsen, & Kåreholt, 2013). Däremot finns det ett behov av mer forskning kring de faktorer som kan påverka människors vilja och förmåga att stanna kvar längre i arbetslivet. Denna avhandling avser att fördjupa kunskapen kring faktorer som bidrar till ett längre arbetsliv och aktivitetsbalans även i ett långsiktigt perspektiv.

Syfte

Det övergripande syftet i denna avhandling var att fördjupa kunskapen om aktivitetsengagemang bland äldre personer från 55 års ålder till mycket gamla personer över 80 år.

Urval, metod och resultat i avhandlingens fyra delstudier

Avhandlingen är baserad på fyra olika delstudier, tre kvalitativa och en kvantitativ där tvärsnittsdesign (Studie I-II och IV) och longitudinell kohortdesign (Studie III) har använts. Studie I-II baserad på data från tre olika verksamhetsområden, konstruktionsindustri, teknisk industri samt kommunal äldreomsorg i fyra olika kommuner i Skåne. I Studie III användes data från Folkhälsoenkäten i Skåne (Carlsson, Merlo, Lindström, Östergren, & Lithman, 2006). Studie IV baserades på ett urval av mycket gamla personer som deltagit i den svenska ENABLE-AGE undersökningen (Iwarsson et al., 2007).

Studie I

Syftet med Studie I var att beskriva vilka incitament det fanns för ett längre arbetsliv bland äldre personer över 65 år som fortfarande arbetade. Datainsamling gjordes med sex fokusgrupper (n=24) där deltagarna var mellan 66-71 år.

I resultatet framkom två teman: *Förutsättningar* och *Drivkrafter*. När det gällde förutsättningar handlade det om deltagarnas hälsa och vilka förutsättningar som fanns för att förena arbetslivet med familjen och andra aktiviteter som deltagarna var engagerade i. De drivkrafter som framkom handlade om att utmanas, inkluderas och att få bättre ekonomi. Den viktigaste drivkraften var att bli utmanad med stimulerande och ibland lite knepiga arbetsuppgifter. Om inte arbetsplatsen kunde erbjuda detta övervägde deltagarna att pensionera sig. Att vara inkluderad berörde de sociala aspekter som fanns på arbetsplatsen. En positiv inställning från chefer och arbetskamrater bidrog till att deltagarna kände sig värderade och behövda. Det framkom dock även viss besvikelse då en del av medarbetarna inte fick möjlighet till kompetensutveckling eller inte kallades till hälsoundersökningar längre. Anledningen till detta uppgavs vara åldern. Att få en bättre ekonomi kunde också vara en drivkraft och även om det fanns olika uppfattningar om vikten av detta. Deltagarna var överens om att de fortfarande arbetade för pengarna men att om de andra drivkrafterna inte fanns kunde de avsluta sitt yrkesliv.

Studie II

Syftet med denna studie var att beskriva upplevelse av aktivitetsbalans hos äldre medarbetare över 65 års ålder. Resultatet baseras på data från de fokusgrupper som även användes i Studie I samt två enskilda intervjuer.

I resultatet framkom att deltagarnas upplevelse av aktivitetsbalans kunde relateras till en *harmonisk mix av aktiviteter, förmågor och resurser* samt *värde och mening i aktivitet*. Det framkom att deltagarna tidigare hade arbetat väldigt mycket och även övertid och därför inte hunnit med så mycket mer än arbete. Nu hade de däremot slutat arbeta övertid och en del hade även minskat sin arbetstid och arbetade inte längre heltid. Ett längre arbetsliv bidrog till aktivitetsbalans för deltagarna eftersom de skulle ha förlorat en av de viktigaste aktiviteterna om de pensionerat sig, nämligen arbetet. Däremot hade de ändrat sitt aktivitetsmönster baserat på vad de tyckte var meningsfullt vilket bidrog till en harmonisk mix av aktiviteter. Framför allt upplevde de att sociala aktiviteter hade saknats tidigare vilket de nu prioriterade.

Studie III

Syftet med studie III var att undersöka samband mellan psykosociala arbetsfaktorer och socialt deltagande i ett långtidsperspektiv (n=1098). Deltagarna var mellan 55-76 år och arbetade minst 10 timmar per vecka år 2000 men hade slutat arbeta vid uppföljningen 2010.

Resultatet visade att socialt deltagande varierade beroende på hur arbetet var beskaffat. Psykosociala arbetsförhållanden där deltagarna hade hög kontroll i arbetet kunde förutsäga högt socialt deltagande även efter pensionering. Dessutom visade resultatet att personer med ett högt socialt deltagande under arbetslivet hade ett fortsatt socialt deltagande även i ett långsiktigt perspektiv.

Studie IV

Syftet med studien var att beskriva hur mycket gamla personer upplever sitt aktivitetsengagemang utanför hemmet (n=21).

Resultatet visade en variation avseende upplevelsen av aktivitetsengagemanget som handlade om att *fortsätta göra det man alltid gjort, använda sig av tillgängliga resurser* samt att *leva under begränsade omständigheter*. Trots att aktivitetsengagemanget hade minskat försökte deltagarna att göra som tidigare. Det framkom att om arbetet hade upptagit mycket tid under arbetslivet och inte möjliggjort så många andra aktiviteter resulterade det även i få aktiviteter som pensionär. Funktionella begränsningar tillsammans med hinder miljön var också faktorer som påverkade möjligheten till aktivitet utanför hemmet. Dock försökte deltagarna ändå att delta men på en begränsad och mindre aktivitetsarena.

Avslutningsvis

Denna avhandling visar på en del faktorer som kan bidra till ett längre arbetsliv och att ett längre arbetsliv även kan bidra till aktivitetsbalans. Psykosociala och organisatoriska faktorer på arbetsplatsen såsom möjlighet att påverka arbetsuppgifter och arbetstid, möjlighet att delta i kompetensutveckling och känna sig inkluderad är viktigt. Även i ett långsiktigt perspektiv har faktorer under arbetslivet en betydelse och åtgärder för ett hållbart arbetsliv har betydelse inte bara under arbetslivet utan kan även bidra till ett hälsosamt och aktivt åldrande.

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The demographic changes with population ageing and a rapidly growing share of very old people will put an increasing pressure on the health and social care system. In order to both restrict early retirement and force people to extend their working life pension systems are changing in many European countries.

Besides that older people have to extend their working life it is important to optimize opportunities for valued occupations and a variation of occupations that contributes to healthy and active ageing.

More research is desirable on factors that in a positive way affect people's will and opportunities to work longer. Especially such knowledge should be valuable among those who actually have extended their working lives i.e. older workers. This thesis adds to the knowledge on how work may contribute to occupational engagement and occupational balance for older people also in a long-term perspective.