Gender equality and health experiences
Workplace patterns in Northern Sweden

Sofia Elwér
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Abstract

**Background** Gendered practices of working life create gender inequalities through horizontal and vertical gender segregation in work, which may lead to gender inequalities in health experiences. The workplace is an important part of the social circumstances under which health opportunities and constraints are shaped. The workplace has also been identified as an important arena for gender constructions. Still, there is a lack of research about the relations between workplace gender equality and health experiences. The aim of this thesis was to explore gender equality and health experiences in a workplace setting.

**Methods** Qualitative and quantitative methods were used. In the qualitative studies all caregiving staff at two establishments providing care for elderly was invited to participate in focus groups (Papers I & II). A moderator led 14 focus group discussions. Qualitative content analysis was used to analyse the transcribed discussions. For the quantitative studies questionnaire data from the Northern Swedish Cohort (n=836) were analysed and supplemented with register data about the participants’ workplaces. The register data were used to stratify the workplaces according to gender composition (paper IV) and to create gender equality indicators of the number of women and men at the workplace, education, salary and parental leave (Paper III). Cluster analysis was used to identify patterns of gender equality at the workplaces. Logistic regression analysis, adjusting for individual socio-demographics and previous psychological distress, were used to analyse psychological distress in relation to both clusters and gender compositions.

**Results** This thesis identifies various workplace patterns of gender equality and how they are related to health experiences. The results from the focus group study showed that workplace stressors had a structural character, often originating from societal processes outside the own organization, whereas health resources had a relational character and were constructed within the organization (paper I). Gender equality was seen as a structural issue not connected to the individual health experiences and gender inequalities were justified through focusing on personalities and interests in work division (paper II). The cluster analysis resulted in six distinctive clusters with different workplace patterns of gender equality (paper III). The most gender-equal cluster was characterized by gender equality in salary and parental leave and was associated with the lowest prevalence of psychological distress, with no significant differences between women and men. The clusters were associated with psychological distress among women only. The highest odds for psychological distress among women were found in a traditional unequal cluster. Analyses of the gender composition at the workplace...
showed that the highest prevalence of psychological distress was found at workplaces with a mixed gender composition (paper IV). The psychosocial work environment was rather similar independent of the workplace gender composition. The factors most strongly associated with psychological distress were high demands and low control at workplaces with more men, being looked down upon at workplaces with a mixed gender composition, and social support at workplaces with more women.

**Conclusion** Gender perspectives highlight the importance of gender relations in research on work-related health. Gender inequalities at workplaces can be part of the explanation to women’s worse self-rated health. A multidimensional view of gender equality is necessary to understand health consequences of specific workplace situations. Workplaces are important arenas for health promotion activities and gender equality aspects needs to be taken into account to reach both women and men. Adequate health promotion needs to shift focus from individual health strategies to structural solutions that can challenge the root of the problem.
Sammanfattning på svenska


Variationen i den psykosociala arbetsmiljön var liten mellan arbetsplatser med olika könssammansättning men det fanns skillnader i sambanden mellan den psykosociala arbetsmiljön och psykiska besvär. De faktorer som hade starkast samband med psykiska besvär var höga krav och låg kontroll på arbetsplatser med en majoritet män, att bli ”sedd ner på” på könsblandade arbetsplatser, och socialt stöd på arbetsplatser med en majoritet kvinnor.

Original papers

This thesis is based on the following papers:


IV. Elwér, S., Johansson, K., Hammarström, A. Workplace gender composition and psychological distress: the importance of the psychosocial work environment. *In manuscript*.

* Contributed equally

Published papers are reprinted with the kind permission of the publishers. An overview of papers is presented in figure 1.
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<td>Gender (in) equality among employees in elder care: Implications for health.</td>
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Figure 1. Overview of the papers
Introduction

This thesis explores the association between gender equality at workplaces and health experiences. It is well known that gender segregated work, both paid and unpaid, generates inequalities between women and men in the distribution of resources, benefits and responsibilities (Messing & Östlin, 2006). Gender inequalities are manifested and sustained at the workplace with gendered health outcomes as a consequence (Östlin, 2002). Through their history in relation to gendered work, workplaces are themselves bearers of gender (Connell, 2006). Workplaces therefore constitute gendered social circumstances in which health opportunities and constraints are shaped. A focus on workplaces as situations enables us to explore similarities and differences between women’s and men’s health experiences (Schofield et al., 2000). Understanding the importance of settings and situations can also open our eyes for how health promotion can target situations connected to ill-health and how to develop supportive environments (Baum, 2008).

The studies included in the thesis approaches gender equality from different angles. With a qualitative approach we explore how gender equality is constructed at workplaces in elder care in relation to health experiences. With an explorative quantitative approach we analyse how various gender equality patterns at workplaces are associated with mental health. We also further explore workplace gender compositions in relation to psychosocial work environment and mental health.

On the cover of this book you see a crowd of people on their way to their workplaces in an industrial setting. The painting ‘Going to work’ by the English artist L.S. Lowry visualises the patterns that people make already on the way to their workplaces. It is how these gendered patterns enter the workplaces and how they affect experiences of health that will be scrutinised in this thesis.
Background

This work is located in the interdisciplinary field of public health and is also related to several other fields of knowledge such as sociology, organizational research, occupational health and gender studies. Finding the way through this jumble of research paradigms has been one of the major challenges in writing the thesis. In this section I will present research and theory that have guided my work. Some of the theories have been present from the beginning in the formulations of my research questions, whereas others have been incorporated during the process in order to understand the results of the empirical research.

Public health perspectives on workplaces and gender

The thesis focuses on health experiences in working life and is concerned with the unequal distribution of ill-health between men and women as well as the social determinants of health. To identify underlying political, social and behavioural determinants of health inequalities is a core interest of public health research (McMichael & Beaglehole, 2009). The thesis connects to the branch of public health that stresses the importance of social structures, like communities, workplaces and schools, as conditions that influence and shape behaviour and patterns of health and illness (Baum, 2008). This “new public health” has criticized traditional health promotion for focusing on individual behavioural change and not recognizing that behaviour is shaped in a social context. Individual-, behavioural approaches therefore risk victim−blaming where the individuals are made responsible for consequences that are partly out of their control. A focus on settings and social circumstances can therefore redirect the responsibility of health promotion from individuals and help people to improve their health through supportive environments (Baum, 2008). The settings approach is the point of departure for the qualitative studies in this thesis (papers I & II) that explores how gender equality and health experiences are shaped in the social setting of a workplace. In the quantitative studies (papers III & IV) epidemiological methods are used to explore inequalities in the distribution of ill-health between and within workplace settings. Social inequalities has been researched in social epidemiology showing that countries with a small income gap between rich and poor are better off in terms of health status (Wilkinson & Pickett, 2009). By explicitly exploring social determinants of health, disease and well-being in populations, social epidemiology puts the social phenomena at centre stage (Berkman & Kawachi, 2000; Krieger, 2001). The focus on social phenomena also sheds new light on gender as a social determinant of health which is active at structural, intermediate and individual levels of society (Sen et al., 2007). Al-
though gender is an important social and analytical category when examining social conditions, the relational aspects of gender is often ignored in public health research (Hammarström, 2007; Phillips, 2008; Schofield et al., 2000; Öhman, 2008).

**Health perspectives**

In this thesis we use both qualitative and quantitative methods with somewhat different approaches to health experiences. In the qualitative papers (Papers I & II) the health perspective is social humanistic. Within this perspective Pörn (1984) defines health as the overall ability of an individual to act on goals in life which is restricted by physical and mental resources but also by the social context within which we act. Experiences of health consequently reflects the whole life situation of the individual where social contexts can both facilitate and complicate an individual’s possibilities to realize her goals (Antonovsky, 1987). Health experiences can therefore be understood as interwoven with all aspects of life such as work, family situation, class, gender, ethnicity etc. In papers I & II we focus on both health resources and health stressors for a holistic description of health experiences. In the quantitative papers (III & IV) we explore illness in the shape of psychological distress. Psychological distress can be defined as an unpleasant subjective state which has both emotional and physiological manifestations (Mirowsky & Ross, 2003). Worries, anxiety, sadness and tenseness can be examples of emotional manifestations of psychological distress, whereas concentration problem, sleeping problems, lack of appetite, cold sweats, palpations are more physiological manifestations. In addition to being an unpleasant state in itself psychological distress has also been shown to be a predictor of later ill-health and mortality (Ringbäck Weitoft & Rosen, 2005; Russ et al., 2012). Psychological distress is unevenly distributed in populations, and although the experience of psychological distress is subjective the causes are strongly related to social circumstances. Some established patterns of psychological distress are that higher levels are found among lower socioeconomic groups, unmarried people, parents, women and young adults (Mirowsky & Ross, 2003). A critical link among all these established patterns of distress is that they relate to a sense of control over the own life in terms of autonomy, opportunity and advantages. Working life is an important arena for control, foremost as a measure for economic independency, but also in relation to latent functions such as time structuring of the day, being part of a collective purpose, and contributing to status and identity for the individual (Jahoda, 1982).

**Gender perspectives**

Gender is a basic principle for how society is organised that is strongly related to power and control over the life situation. In this thesis gender is approached as
social and cultural definitions of what it means to be a woman or a man. Gender is constructed in social and historical patterns and processes that are produced and reproduced, and permeate society (Connell, 2002). All levels of society, including institutions, organizations, workplaces and families are embedded with gender relations. Gender relations is a pattern of social relations in which the positions of women and men are defined and the cultural meaning of being a woman or a man is negotiated (Connell, 2006). A gender relational approach to health focuses on how social environments shape health and illness among women and men (Schofield et al., 2000). Applying a relational approach to workplaces is useful for examining how gendered inequalities in health are manifested and sustained at the workplace. The relational perspective is also compatible with the focus on settings in the “new public health”. In public health and epidemiological research gender is often used as a neutral background variable that can be controlled for in statistical analyses. However, a discussion of how gender relations in society may impact the results based on gender theory is often lacking (Hammarström, 2007; Öhman, 2008). In this thesis gender theory has been guiding the research questions as well as the analyses of data. Gender equality and health is explored and analysed in the light of gender theory concerning gendered organizations. In the following sections of the background I will describe theories of and approaches to gender equality and gendered organizations and how they can contribute to the understanding of health experiences at workplaces.

**Gender equality**

Gender equality concerns power relations in society between women and men. The roots of the concept are from feminist politics of equal opportunities, and gender equality is now a political ideal around the world. However, the meanings attached to the concept, as well as the solutions for how to achieve gender equality, are consistently being debated and negotiated (Nentwich, 2006). On the one hand the concept of gender equality is applied to quantifiable issues such as representation of women and men or equal salaries for equal work. On the other hand the concept is applied to discursive issues of status, who’s voices is being heard and norms concerning which values are prevailing in society. Sweden is known as a progressive country regarding gender equality. In 1980 the Swedish government’s gender equality policy was adopted stating that women and men should have the same power to shape society and their own lives through having the same opportunities, rights and responsibilities in all areas of life (Swedish Governmental report, 2005). Since 2008 gender equality in working life is regulated by the Discrimination Act with the purpose to combat discrimination and promote equal rights (Swedish Code of Statutes, 2008). The act includes different grounds for discrimination like sex, transgender identity, ethnicity, religion, disability, sexual orientation and age. The act states that all employers with 25
or more employees are required to establish a written gender equality plan that states how to prevent sex discrimination and promote gender equality. A working life characterized by diversity, gender equality and non-discrimination is also a part of the Swedish public health policy (Hogstedt et al., 2004).

Nordic researchers in the social sciences have studied gender equality in critical perspectives with an understanding of gender equality as a phenomenon that is constantly being constructed and filled with meanings in different contexts through negotiations between individuals, groups as well as in societal structures (Magnusson et al., 2008). This constant construction of gender equality makes it difficult to grasp what true gender equality would mean. As gender equality focuses on power relations between women and men it also may restrict our possibilities to think about gender as interacting with ethnicity, nationality, sexuality and social class. Some researchers have therefore focused on analysing the gender equality discourses and what meanings that are attached to the concept in politics (Rönnblom, 2005; Skjeie, 2008) as well as in couples (Magnusson, 2011). However, to my knowledge discourses of gender equality in a workplace settings has not been explored. Although there is a broad acceptance for a general discourse of gender equality in society, practices are often characterised by scepticism and resistance, which has been identified by several scholars as gaps between political goals and practices (Holli et al., 2005).

Other researchers have approached gender equality as a social situation that can be operationalized and measured with quantitative indicators or evaluated through interviews and observations. Several indices have been developed to measure gender equality in different settings (Phillips, 2008; Sörlin, 2011). Many of these indices are developed to monitor different aspects of gender equality in countries, for example, the global gender gap index (Hausmann et al., 2012) and the gender inequality index (United Nations Development Programme, 2011). At the organizational level gender equality has been measured as family supportive organization (Allard et al., 2011), indexed interviews and field notes of gender equity in public institutions (Connell, 2006), and an organizational gender gap index (OGGI) based on register data (Sörlin et al., 2011a). Within this approach gender equality can be measured through comparison of men and women on selected indicators in the private and/or public spheres. Studies in this field are often guided by theories of feminist justice which emphasises the importance of equality in all spheres of life (Moller Okin, 1989).

In this thesis we view the different perspectives of gender equality as complementary, providing different perspectives of the relations to health experiences. In the qualitative studies (papers I & II) we will explore the discourses around gender equality and health experiences at the workplace. In the quantitative
studies (papers III & IV) we will focus on measurable aspects of gender equality and how they relate to psychological distress.

**Gender equality and health experiences**

Gender equality in relation to health experiences has been examined in research on women’s role expansion, from the traditional women dominated private sphere to the male dominated public sphere. The stress hypothesis states that an increased number of activities and responsibilities increase pressure, conflict and ill-health (Goode, 1960). In contrast to this, the expansion hypothesis states that individuals with several roles have health advantages because of the possibilities to compensate setbacks in one area with prosperity in another (Barnett & Marshall, 1992). Both hypotheses have support and are important in understanding the relationship between work and health experiences so that the role expansion hypothesis is valid if the work strain is at a reasonable level (Härenstam et al., 2001). Differences in life conditions between women and men have also been used to explain gender differences in health status. The convergence theory suggests that a convergence of women’s and men’s living conditions would lead to a convergence in health outcomes. The convergence theory has been supported in research on gender equality of municipalities in relation to sickness absence and life expectancy (Backhans et al., 2007) as well as gender equality in companies in relation to sickness absence (Sörlin et al., 2011b). However, other studies concerning risk behaviour (Waldron, 2000) and parental share (Månsdotter et al., 2006) have found that the convergence theory needs to be complemented with other explanatory models.

Studies from the private sphere have shown that inequality between partners in the responsibility of domestic work is more strongly associated with psychological distress than the amount of work performed (Bird, 1999; Glass & Fuji-moto, 1994; Harryson et al., 2012). In the public sphere research has focused on the societal level like states or municipalities. Backhans et al (2007) show that gender equality measured in political participation, division of labour (in private and public sphere) and economic resources, is generally correlated with poorer health status for both men and women. They see this as the result of an unfinished equality where women become more burdened and men as a group have lost many of their old privileges. Backhans et al (Backhans et al., 2009) also show that the health effects of gender equality in both the private and the public sphere (child care leave, parental leave, occupation and income) is dependent on the context of gender equality in the municipality (political participation, economic resources, occupational sex segregation, caring work). Fathers who are equal and live in an equal municipality have lower levels of sick leave than the average, whereas fathers who are less equal than their municipality have higher levels of
sick leave. For mothers, being traditional in the public sphere seems to be protective for high levels of sick leave, especially if you live in a traditional municipality.

Gender equality at the organizational or workplace level in relation to health experiences is sparsely studied. Although some of the research referred to above use indicators from the working life (occupational segregation, income and parental leave) the unit of analysis is the family or communities. As the workplace constitutes a major part of life for the working population, gender equality at this level might be as important as the gender equality in the private sphere for health experiences. A pioneering Swedish study in the field of organizational gender equality and health has shown associations between gender-equal companies, measured with an organizational gender gap index, and days of sickness benefit days (Sörlin et al., 2011b). Gender equal companies were found to have higher levels of sick leave compared to other companies, but the differences between women and men were smaller. The index showed no associations to self-rated health (Sörlin et al., 2012). Several studies has also analysed single aspects of gender equality in occupations and at workplaces such as gender composition in relation to sick-leave and self-rated health (Bryngelson et al., 2011; Hensing & Alexanderson, 2004; Svedberg et al., 2009). In addition to such risk factor approaches there is a need to consider how combinations of different variables are at play simultaneously (Härenstam, 2009). A contextual approach that includes many different aspects of gender equality can therefore add new perspectives that enable us to grasp how different patterns of gender equality at the workplace relate to health status.

**Gendered organizations**

Work constitutes a major part of life for a majority of people and how work is organized has consequences for the whole life situation. Working life is therefore identified as an important setting for public health research and constitutes a suitable point of departure for examining the gendered structures of health experiences. Throughout history feminists have struggled to reveal and counteract gender oppression at work, not the least as a mean for diminishing gender inequalities in health experiences. As a critic to previous organizational studies, which in practice have studied men’s working conditions and experiences, a research field has developed around gendered organizations (Acker, 1999; Connell, 2006; Kanter, 1977). The overall pattern of gender relations within an organization constitutes its gender regime (Connell, 2006; Connell, 2002). The gender regime as defined by Connell involves four dimensions of gender relations - division of labour, power relation, symbolic relation and emotional relation. A local gender regime might reproduce the social patterns of gender relations that
constitute the gender order of society. However, individual experiences of health and illness are affected by both the general gender order of society and the local gender regimes surrounding the individual at the workplace. A gender regime, like gender relations in general, is not fixed but constantly changing and redefined in interaction. Entering into paid work by women has changed the gender regimes of many organizations and created some work tasks and professions as suitable for women. The women dominated professions and work tasks were, and still often are characterized by little power, few possibilities for promotions, low status and low salaries compared to the work tasks and professions performed by men (Hirdman, 1994, Kanter, 1977). Although there is a growing body of research on gender on the intermediate societal level such as the workplace the gender perspective is still often marginalized in organizational studies (Connell, 2006). Connell's relational theory connects the gender regimes of organizations to the individual as well as the society level and is therefore useful when examining health experiences at the workplace.

Gender composition of workplaces and occupations has been analysed in the light of Kanter's theory on "tokenism", suggesting that small minorities at the workplace are considered as representatives of their category rather than individuals with effects of being more visible and being considered as a deviant other (Kanter, 1977). Kanter's theory has been extended to the health field with hypotheses of negative health consequences of being in a gendered minority through pathways of increased stress (Hunt & Emslie, 1998). A few studies have tested Kanter's theory in terms of sickness absence indicating that gender composition is to some degree related to sickness absence for women but not for men. Bryngelson et al. (2011) and Mastekaasa (2005) found that the hypothesis of the token situation as being especially harmful for health experiences has not been supported.

In the gendered work division of society caring is often performed by women. Workplaces in elder care, where a vast majority of the employees are women, are explored in this thesis as an example of gendered organizations with gendered health experiences. Work stressors of care workers in elder care have been explored in a number of studies in Sweden as well as internationally (de Jonge et al., 2008; Eriksen et al., 2006; Gustafsson & Zachary, 1999, 2008; Ron, 2008; Schaefer & Moos, 1996). Although the gendered work organizations in the analysis by Trygdegård, 2005, but few studies apply structured gender perspectives in the analysis (Trygdegård, 2005, Ron, 2008; Schaefer & Moos, 1996; Gustafsson & Zachary, 1999). In a Swedish context the gendered work organizations in elder care has been explored (Storm, 2008; Sörensdotter, 2008) but not with a focus on health experiences. Although the caring work performed at the workplaces per se is not the main focus of our studies, we found that the health resources of the employees were intricately tied to the gendered work organization of elder care.
intertwined with the caring activity, which in turn is shaped by ideas about femininity. For an adequate understanding of these results we therefore turned to theories of gendered caring work.

The sociologist Beverly Skeggs has explored how identities are constructed in relation to structures of gender and class (Skeggs, 1997). She outlines the paradox of the caring self, i.e. that the caregiver should always be attentive to the needs of the caretakers but is not expected to have needs of her own. Skeggs identifies caring as one way of working class women to prove themselves respectable to others. She argues that proving oneself as respectable is important for the working class as it is often described as unrespectable, whereas higher classes are not judged in this way and therefore have nothing to prove. Although Skeggs is not herself concerned with health aspects it is not farfetched to see the paradox of the caring self as a risk situation for ill-health. Similar situations have also been described within health research in terms of compulsive sensitivity as an experience of women being caught in caring, which is suggested to be connected to negative health experiences (Forssén et al., 2005).

Kari Wærness (1983) has explored caring from the horizon of rationality. She argues that responsibility for caring is ascribed on the basis of gender and is intertwined with the formation of “femininity”. The rationality of caring is characterised by emotional, informal relations between the caregiver and the dependant, and the focus is on the needs of the dependant to achieve well-being. Contrasting to the rationality of caring is the scientific rationality which is emotionally neutral, formal and aimed at curing or improving the health of the patient. Kari Wærness argues that institutions which provide caring services with the aim to maintain a status quo or slow down declining health, such as elder care, cannot motivate demands for more resources with efficiency criteria but have to appeal to more general humane values. Caring institutions with the goal to cure patients therefore are more prestigious. A professionalization of traditional caring professions can be seen as an attempt from women within these professions to acquire more recognition on the premises of the established male society.

Joan Tronto (1989) distinguishes “caring for” as a traditional sphere of women that involves attentiveness to the need of others through a commitment of time and effort that may be made at a high price to the self. The caring ethic could therefore be seen as an ethic most appropriate for those in a subordinate social position. Caring, in the form of attentiveness, may be a reflection of a survival mechanism for women or others who are dealing with oppressive conditions, rather than an expression of personality. The feminine approach to caring bears the burden of accepting the traditional gender divisions in a society that devalues what women do. A feminist approach for caring begins by broadening our understanding of what caring for others mean.
**Psychosocial work environment**

The psychosocial work environment consists of a combination of the social environment and psychological processes occurring at a workplace that are of importance for health experiences (Stansfeld & Candy, 2006). Although gender plays an important role in these processes and relations, gender theoretical perspectives are often left out in analyses of psychosocial work environment (Messing, 2013). The demand-control-support model is one of the most influential models in this area. The model has previously been shown to be associated with a variety of health outcomes (Karasek & Theorell, 1990). The model suggests that the combination of demands, control over a work situation and social support are connected to health status. The model identifies high strain situations with high demands, a low level of control and low social support as a risk situation for ill-health. The model is now well researched and although there is a general acceptance of demands, control and support as important factors affecting stress, there is a debate on whether the dimensions are preferably used as predictors of ill-health when combined or as separate dimensions (de Lange et al., 2003). The demand-control-support model was developed and tested on a population of men in blue-collar work (Johnson & Hall, 1996) but has nonetheless been applied to other populations of men as well as women. Some authors have questioned whether the demand-control-support model is suitable for women’s working conditions (Hall, 1989; Messing, 2013; Waldenström & Härenstam, 2008). In an external assessment of the job demand – control model women who reported an active job situation (high demands and high control) were assessed as having more hindrances at work compared to men (Waldenström & Härenstam, 2008). These results suggest that men in active jobs are employed at workplaces with greater possibilities to influence the work situation.

In empirical testing of the demand-control-support model many studies have found differences between women and men. Although the results are not uniform, women are often found to have greater health related benefits from social support, whereas control is of more importance for men’s health status (Beehr et al., 2003; Gadinger et al., 2010). The divergent results between women and men are often understood and discussed in terms of gender roles (Gadinger et al., 2010) and not related to gendered organizations. The concept of gender roles has been criticized for not considering that there are multiple masculinities and femininities, that the variation of traits within each sex is far exceeding the differences between them, that individuals are seen as passive learners of the roles, and also that it fails to acknowledge resistance against gender norms (Connell, 2002). A focus on gender roles also means that part of the structural context of the stress process is ignored (Pearlin, 1989). Focusing on gendered organizations can be a way of exploring the possible structural origin of the stress process and to understand the psychosocial work environment as part of a social context (Johnson & Hall, 1996).
The demand-control-support dimensions are all located at the workplace level. As the interest of this thesis is gender regimes of workplaces, we also wanted to include some work environment aspects that might reflect how the local gender regime of the workplace is related to the gender order of society (Connell, 2006). Status and being part of a collective purpose are two such aspects that have been identified as latent functions of work that are of importance for wellbeing (Jahoda, 1982). In addition, both aspects are related to a societal position (gender order) rather than a workplace position (gender regime) making them interesting in relation to the gender segregated labour market. One operationalization of status can be whether or not employees perceive their own work as important, which is an aspect that was analysed previously in a study among employed women in Sweden (Hensing & Alexanderson, 2004).
Aims and objectives

The overall aim of this doctoral thesis is to explore gender equality and health experiences in a workplace setting.

*The thesis addresses the following research questions:*

How are health experiences and gender equality interrelated among employees at workplaces in elder care? (Papers I & II)

How are patterns of gender equality at workplaces associated with psychological distress? (Papers III, I & II)

What is the importance of the gender composition of a workplace for the association between psychosocial work environment and mental ill-health? (Papers IV, III & I)

What types of gender regimes are present at the workplaces and how are they related to women’s and men’s health experiences? (Papers I, II, III & IV)
AIMS AND OBJECTIVES
Methods

This thesis includes several different methods to explore how gendered health experiences are shaped at the workplace. In papers I and II we used the qualitative approach of focus group discussions to analyse how gender regimes of specific workplaces were interrelated with health experiences. The focus group method enabled us to grasp the employee’s general view of their health experiences and gender equality in relation to work. The use of focus groups also made it possible to study discussions among the employees in the workplace – which is an important part of the process where gender and gender inequalities are produced. In papers III and IV we used quantitative data representing a variety of occupations and workplaces to explore associations between different aspects of gender equality at workplaces and health experiences. The triangulation of qualitative and quantitative methods contributes to a more comprehensive understanding of a phenomena through combining analyses of quantifiable, generalizable associations and lived experiences (Patton, 2002).

Both the qualitative and the quantitative studies were set in the Swedish labour market. In Sweden women and men participate in paid work to almost the same extent but the labour market is strongly gender segregated and only about 13 percent of the workers are in occupation where women and men are equally represented (Statistics Sweden, 2012). The labour market is segregated both horizontally, with women and men in different areas, occupations and workplaces, and vertically with women and men in different positions in the hierarchy. Although women and men have the same right to paid parental leave women still use 76 percent of the parental leave days and 64 percent of the temporary parental leave days (caring for sick children)(Statistics Sweden, 2012). The specific setting and method for each study is described below.

Qualitative focus group studies in elder care

In the qualitative studies we used focus group discussions with employees in elder care to explore interrelation between gender equality and health experiences.

Setting

The qualitative studies were set within two nursing homes for elderly in a middle sized town in the north of Sweden. The nursing homes were inhabited by elderly resident in need of extensive assistance, care and medical treatment. Many of the elderly were suffering from dementia and/or other medical conditions and the care-
giving staffs were present at all hours, i.e., day and night. The elder care in Sweden is a branch of business with a majority of women as employees (Gustafsson & Szefbehely, 2005). Muscular pain, fatigue, and exhaustion are shown to be frequent health problems among employees in Swedish elder care (Gustafsson & Szefbehely, 2005), and internationally the studies of stressors of health care workers in elder care are numerous (de Jonge et al., 2008; Eriksen et al., 2006; Ron, 2008; Schaefer & Moos, 1996). Although studies of employees in elderly care in the Nordic countries acknowledge that it is a workplace with a majority of women, few studies apply a gender perspective where gendered power structures of society are included in the analysis (Trygdegård, 2005). The circumstances with low salaries, low status and frequent health problems made the elderly care an interesting site for examining gendered dimensions of health experiences at the workplace. Our main focus was the workplace as an arena for gendered experiences of health. We believe that such focus adds a public health perspective to earlier research with a more specific focus on working conditions and exposure to work strain (Trygdegård, 2005).

**Participants**

The head of geriatric care in the municipality distributed information about our study to all nursing homes in the city during Spring 2006. Two workplaces showed an interest in the project. All caregiving staff at these two workplaces was invited to participate in focus group discussions during paid work time. In total 113 assistant nurses, nurses, occupational therapists, physiotherapists and managers at 5 wards (97 women and 16 men) were invited. The largest occupational group was assistant nurses and this was also the only occupational group that included both women and men, i.e. the other occupational groups included only women. For the physiotherapist and the occupational therapists the nursing homes were only one out of several workplaces. Physicians were connected to the nursing homes as consultants and not part of the work group, and were therefore not included in the study.

**Data Collection**

We started the project with meetings at both workplaces where we described the background and aim of the study and also gave a brief introduction about gender equality from a public health perspective. The introduction was followed by focus groups discussions in two sets with different discussion themes and focus. In the first set 46 employees participated in seven focus group discussions (paper I). In the second set 45 caregivers and managers participated in seven focus group discussions (paper II). The occupational groups in each set of focus groups are presented in table 1.
Table 1: Participants in the focus group discussions divided into occupational groups

<table>
<thead>
<tr>
<th>Occupational Groups</th>
<th>Participants</th>
<th>Women/Men</th>
<th>Participants</th>
<th>Women/Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant nurses</td>
<td>29</td>
<td>21/8</td>
<td>30</td>
<td>23/7</td>
</tr>
<tr>
<td>Nurses</td>
<td>12</td>
<td>12/0</td>
<td>9</td>
<td>9/0</td>
</tr>
<tr>
<td>Physical therapists</td>
<td>3</td>
<td>3/0</td>
<td>1</td>
<td>1/0</td>
</tr>
<tr>
<td>Occupational therapists</td>
<td>2</td>
<td>2/0</td>
<td>2</td>
<td>2/0</td>
</tr>
<tr>
<td>Managers</td>
<td>0</td>
<td>0/0</td>
<td>3</td>
<td>3/0</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>38/8</td>
<td>45</td>
<td>38/7</td>
</tr>
</tbody>
</table>

The focus group discussions were performed following focus-group principles with a moderator leading the discussions and creating an accepting discussion climate (Morgan, 1998). Different segmentations of groups were used in order to facilitate discussions among participants and to get a wide range of experiences (Morgan, 1996). In the first set of focus groups (paper I), the groups were assembled to be as homogenous as possible with regard to occupation and sex. This approach was an attempt to facilitate discussions and enable each occupational group to share experiences without feeling restricted by the presence of other occupations. The homogenous groups in this round were also a way of enabling women and men to speak their minds unaffected by gendered structures of power at the workplace (Morgan, 1996). The purpose of the segmentation was not to compare women and men or the occupational groups regarding the content of the focus groups. However, experienced differences between occupations or women and men that were expressed by the participants are presented in the results. In the second set of focus groups (paper II) the groups were assembled to include participants from different occupations. In each group the assistant nurses came from the same workplace, whereas the other occupational groups came from the other workplace.

The focus groups consisted of between three and ten participants and lasted for approximately 90 minutes. The focus groups took place at one of the included workplaces during paid work time to facilitate for the employees to participate. Time and place were also adapted to suit the participants. A moderator led the discussion, introducing thematic questions to the group. Each area was introduced by the moderator and assisting moderator and discussed and followed up in the group. The focus groups were tape recorded. In the transcribed text no information on sex or occupation for the individual participants was included. The moderators were actively involved in managing the group dynamics with the aim to created possibilities for all participants to make themselves heard in the group. After each session the moderators summarised their impressions from the discussions and the thematic question guide was altered when needed.
In order for the participants to take part of the content of all focus groups and make use of it at their workplace, the two sets of focus groups were summarized and presented at each of the included workplaces. At each workplace the employees selected one area that was discussed in the focus groups that they wanted to continue to work with at their workplace. In a discussion between the employees and the manager an action plan was formulated for how to address the selected issue at the workplace. The purpose of this part of the project was to provide the employees with a possibility to address issues that had been made visible in the focus groups in relation to their own workgroup. A descriptive summary of the formulated goals and methods are presented in the results section of this thesis as an illustration of what the participants considered as important issues.

Analysis

We analysed the transcribed text from the focus group discussions using qualitative content analysis according to Graneheim and Lundman (2003). Although the content analysis has its roots in a quantitative approach from media analysis (Krippendorff, 2004), the qualitative approach developed by Graneheim and Lundman has its scientific roots close to phenomenology as well as hermeneutics with the attempt of studying a phenomena and understanding the underlying meaning of the collected data. We read through the transcribed text with open minds to grasp the content and the variations in the texts. We identified meaning units and labelled them with codes which were discussed among the authors. After resolving differences in the first coding I used the Open Code computer package to systematize codes by dividing them into preliminary categories. The categories and codes were then discussed with all authors again until consensus about the categories was reached. We formulated themes based on the underlying meaning in codes and categories. The findings have been scrutinized and discussed several times throughout the process among the authors and also with other researchers at various seminars and conferences.

Quantitative studies in the Northern Swedish Cohort

In the quantitative studies we used data from the Northern Swedish Cohort to analyse what patterns of gender equality that exists at workplaces and how they are related to psychological distress (paper III), and the association between psychosocial work environment and psychological distress at workplaces with different gender compositions (paper IV).
Setting

Luleå is a middle-sized town in Norrbotten in the North of Sweden. Luleå’s history is intertwined with the steel industry which is still an important employer in the area together with Luleå University of Technology and Norrbotten County Council. The labour market structure of Luleå is comparable to Sweden as a whole in regards to the distribution between branches of business in 2007 at the latest follow up as presented in figure 2 (Statistics Sweden, 2012).

![Figure 2: The distribution in 2007 of women and men in percent in the most common branches of business in Luleå compared to Sweden as a whole (data from Statistics Sweden 2012).](image)

Population

The Northern Swedish Cohort consists of all 1083 pupils in the municipality of Luleå who left, or should have left, compulsory school in the spring of 1981, when the participants were 16 years old. Many of the participants have moved from Norrbotten at some point in their life. Many of them have returned and at the latest follow up (age 42) 59 percent lived in the municipality of Luleå. The participants in the cohort were followed regardless of where they had moved after 1981. This thesis is concerned with cohort participants that are connected to a workplace in Sweden at age 42. The specific sample for each study is described in figure 3. The full coverage of the cohort is extensive (Hammarström & Janlert, 2011) and this section will describe the parts that are of importance for this thesis.
Methods

Data collection
The cohort has been followed with comprehensive questionnaire investigations. Since the start in 1981, when the participants were 16 years old, there have been follow-ups during the years of 1983 (18 years), 1986 (21 years), 1995 (30 years) and 2007 (42 years). The questionnaires have been developed from a number of validated questions covering experiences of school/employment environment, socio-economic conditions, self-rated health and health behaviour (Hammarström, 1986; Hammarström & Janlert, 2011). In this thesis we used data from when the participants were 21 (1986) and 42 (2007) years.

The initial data collection in 1981 as well as the first follow up was conducted at the schools of the participants. At all following follow-ups the participants have been invited to reunions at their former schools during which they were asked to complete the questionnaire. Those who were unable or unwilling to attend the reunions were sent the questionnaire by mail. The participants who did not respond were reminded to do so and structured telephone interviews were conducted with those who preferred as well as with those who had difficulties in reading or writing.

Extensive work was put into finding all participants at each follow up, including those who lived abroad or those who did not have a permanent address. The response rate of the study is therefore unusually high - of the original cohort 94.3 percent (n=1010) still participated after 26 years. The high participation rate can also be attributed to that the principal investigator Anne Hammarström who started the cohort in 1981, had developed personal contact with many of the participants in the cohort after meeting them at their schools at the initial data collection and at class reunions in the follow up data collections which may have increased their motivation to participate.

In this thesis questionnaire data from when the participants were 42 and 21 years old have been analysed and complemented with register data for each participant from the LISA data base, Statistics Sweden. Register data were collected in 2007 for all participants in the cohort and for all other employees at the workplaces of the participants in order to aggregate information on gender equality aspects of the participants’ workplaces (the workplace population). The register data included information about sex, age, income, education, type of workplace, number of days (gross, net) of parental leave use and number of days (gross, net) of temporary parental leave use.
### Methods

**Cohort population:**
Participants in the Northern Swedish Cohort with a workplace in Sweden n=836 (390 women & 446 men) at 639 workplaces

**Workplace population:**
All employees at the participants’ workplaces
n workplaces = 639
n employees = 135,398

Excluded:
Self-employed participants in the Northern Swedish Cohort n = 41 (15 women & 26 men) at 41 workplaces

**Sample paper IV:**
Participants in the Northern Swedish Cohort working at workplaces with more than one employee n = 795 (375 women & 420 men) at 598 workplaces

Excluded:
Participants in the Northern Swedish Cohort at workplaces with only women or only men n = 80 (37 women & 43 men) at 78 workplaces

**Sample paper III:**
Participants in the Northern Swedish Cohort working at workplaces with both women and men n = 715 (338 women & 377 men) at 520 workplaces

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**Measures**

*Gender equality indicators:* Five indicators of gender equality were created through aggregating register data from the workplace population and calculating the women/men ratio for: (I) number of employees; (II) mean salary; (III) mean educational level; (IV) mean days of parental leave; and (V) mean days of temporary parental leave. In each variable a ratio of 1 represents total equality between women and men. For the indicators on w/m ratio of employees, salary and education we used data from 2007. As parental leave use can vary significantly be-
between years, especially at small workplaces, we used data from 2003 – 2007 for both variables on parental leave to ensure a reliable measure with a longer exposure period. To make a contextual analysis the indicators were included in a cluster analysis as described under the section on data analysis. The w/m ratios were categorized in five-item scales to be suitable for cluster analysis. The cut-off points for the indicators were selected based on the distribution in each variable. This resulted in a five-item scale for each indicator that was used in the cluster analysis:

- gender unequal ratios with higher scores for men
- moderately gender unequal ratios with higher scores for men
- gender equal ratios
- moderately gender unequal ratios with higher scores for women
- gender unequal ratios with higher scores for women

**Gender composition:** In paper IV the study population was stratified into three groups based on register data about the gender composition of their workplace: more men (>60 percent men at the workplace), mixed (40-60 percent women at the workplace), and more women (>60 percent women at the workplace).

**Psychosocial work environment:** Psychosocial work environment at age 42 was assessed from questionnaire data from the participants in the Northern Swedish Cohort with the job demand, control and support dimensions from the Swedish version of the Demand – Control – Support questionnaire (Landsbergis et al., 2000). Demands were measured with a 5 item index. Control was measured with four questions on skill discretion and two questions on decision authority. Support was measured with a 6 item index. The four point option format ranged from ‘agree completely’ to ‘do not agree at all’. The scores in each dimension were added together. The scales were skewed and therefore dichotomized at the third quartile.

**Status and collective purpose:** Status for the cohort participants at age 42 was measured with the question ‘Sometimes it feels like people are looking down on me’. Collective purpose at the same age was measured with the question: ‘I am engaged with things that are of importance’. For both questions the respondent could give an answer between 1 (don’t agree at all) and 7 (agree completely). The scales were skewed and therefore dichotomized at the third quartile.

**Psychological distress:** For both articles (papers III and IV) psychological distress was used as the health outcome. Psychological distress at age 42 for the cohort participants was measured in the questionnaire with an index consisting of six items (restlessness, concentration problems, worries/nervousness, palpitations, anxiety and other nervous distress) that the participants had felt during the last
12 months. The questions were derived from the Swedish Survey of Living Conditions (Statistics Sweden, 1980). The index was not normally distributed and therefore dichotomized (0=no distress, 1= one or more items of distress).

**Background variables for the Northern Swedish Cohort:**

*Socioeconomic position* at age 42 was measured with the Swedish SEI classification of occupational level (Statistics Sweden, 1982). Upper white-collar workers (including self-employed) was used as reference category compared to lower white-collar and blue collar workers.

*Gender* was measured as women=0, men=1.

*Type of work* at age 42 was measured with a work object classification system based on professions in the Nordic occupational classification (Härenstam et al., 2003). Work was divided into three categories: working with people (e.g. health care, education), working with data (e.g. administration, information technology), and working with things (e.g. manufacturing, construction, cleaning).

*Psychological distress at age 21*, before marriage/co-habiting and labour market was used as an indicator of health-related selection. The questions and dichotomization of the index was exactly the same as at age 42.

**Background variables for the workplace population:**

Register data were collected on age distribution at the workplaces presented as proportion of employees younger than 38 years old.

**Statistical analysis**

In paper III we wanted to use an explorative method to identify different situations where many different aspects of gender equality were taken into account. We found that hierarchic agglomerative cluster analysis was suitable for our purposes (Bergman & Magnusson, 1997). This method is useful for exploring how different variables coexist and constitute different situations, such as work situations with different risks of ill-health (Härenstam et al., 2003). Data were prepared according to recommendations given by Bergman et al. (Bergman et al., 2003) with imputation of data and multivariate outlier analysis resulting in a final sample of 520 workplaces. Ward’s method was used and performed in the SLEIPNER 2.1 software. In this analysis all workplaces start out as separate clusters. In each step the workplaces that are most similar to each other and most different from other workplaces are clustered. The analysis results in a range of cluster solutions that differs as regards to homogeneity and model fitness. Homogeneity is measured by squared Euclidean distance measure (ESS). A low ESS value (>1) indicates a high degree of homogeneity within the cluster. Explained
ESS is a measurement of model fitness; if explained ESS is 100 percent each workplace within each cluster in the cluster solution has identical profiles. The distribution of explained ESS of the cluster solutions was used to find a suitable solution. When a cluster solution was chosen, a k-means relocation cluster analysis was performed in order to maximize the explained ESS and homogeneity of the clusters.

After the cluster analysis was performed, differences between the clusters in psychological distress were tested by chi-square test for the participants in the Northern Swedish Cohort. Multivariate logistic regression analysis was performed separately for women and men to further assess the association between different patterns of gender equality and psychological distress, adjusting for individual socioeconomic position, earlier psychological distress, type of work and age distribution at the workplace.

In paper IV the work situation for the participants in the Northern Swedish Cohort in terms of psychosocial work environment, socioeconomic position and type of work as well as the occurrence of psychological distress in each of the three gender composition strata was analysed. Percentages were calculated for the full sample as well as for women and men separately. Differences were analysed with chi-square test. Correlations were tested pairwise with Pearson's test between all exposure variables. Crude and multivariate logistic regression, with psychological distress at age 42 as outcome, were performed for all exposure variables calculating odds ratios with 95 percent confidence intervals.

The logistic regression analyses in papers III and IV were performed using SPSS statistics version 19.0 with a significance level at 0.05 and 95 percent confidence intervals.

**Ethical consideration**

The studies were performed in accordance to prevailing ethical principles with approval from the Regional Ethical Review Board in Umeå, Sweden. Written informed consent was collected from the participants in the focus group study. In the Northern Swedish Cohort the participants are regarded as giving consent when they send in the questionnaire or are willing to participate in telephone interviews. The participants in the cohort study were at each follow-up informed about which register data that were collected. In both studies the respondents were informed that the participation was voluntary and that they could withdraw from the studies at any time and without explanation.
Results

Interrelations between gender equality and workplace health experiences among employees in elder care (papers I & II)

The participants described health resources as mainly created in the relations at the workplaces, whereas stressors were experiences as created mainly at structural levels outside their own workplaces. Gender equality was advocated in principle and in society but in their own work life gender inequalities were often justified with differences in personalities and interests.

Four central themes were identified in relation to how health experiences and gender equality was constructed and interrelated among employees at workplaces in elder care (table 2). The first two themes concerned health enhancing and damaging experiences of work – “working against the odds” and “making work matter” (paper I). The remaining two themes concerned gender equality - “advocating gender equality in principle” and “justifying gender inequality with individualism” (paper II). The themes are summarized in the overarching theme “dealing with it – individual and relational strategies to handle structural stress” that combines the results from the two studies. The themes are described below.

<table>
<thead>
<tr>
<th>Overarching themes</th>
<th>Themes</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing with it – Individual &amp; relational strategies to handle structural stress</td>
<td>Working against the odds (paper I)</td>
<td>Reaching the limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worthless competence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Constant nagging</td>
</tr>
<tr>
<td></td>
<td>Making work matter (paper I)</td>
<td>Strength from the work group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfaction of caring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Individual responsibility</td>
</tr>
<tr>
<td></td>
<td>Advocating gender equality in principle (paper II)</td>
<td>Equal salary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Equal work division</td>
</tr>
<tr>
<td></td>
<td>Justifying gender inequality with individualism (paper II)</td>
<td>Gendered specialization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women taking on responsibility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women managing family and health</td>
</tr>
</tbody>
</table>
“Working against the odds”, refers to a perceived constant struggle for the employees toward three kinds of stressors with negative health effects. The category “reaching the limit” represents the experience of an extensive and exhausting workload. “Worthless competence” represents the experience of not being respected as competent professionals at work or in private life. “Constant nagging” includes insufficient cooperation between co-workers but also constant organizational changes creating confusion and uncertainty.

“Making work matter” refers to the employees’ experiences of positive forces that kept them healthy. The positive forces can be regarded as the social immune system of the workplace, built up by three main defences represented in three categories. “Strength from the work group” represents experiences of support from co-workers in the shape of praise and acknowledgement, having fun together and being part of a group. “Satisfaction of caring” constituted the core of how the employees expressed work pride where the gratitude and positive response from the elderly was an important aspect. The caregivers also experienced health as an own responsibility and a precondition for work to function, which is included in the category “individual responsibility”.

“Advocating gender equality in principle” was built up of the categories “equal salary”, “more men” and “equal work division”. Gender equality was mainly described in structural and quantifying terms and the workplaces were described as a women’s world with women’s conditions. Equal salaries within the occupation were advocated and the overall salary levels were considered as too low. Recruiting more men to the elder care was seen as a method to raise salaries and to improve the work climate. An equal division of the work tasks was considered as a fair work division.

“Justifying gender inequality with individualism” was built up of the categories “gendered specialization”, “women taking on responsibility” and “women managing family and health”. The theme included what the participants described as individual differences and what they therefore often saw as acceptable exceptions to the gender equality ideal described in the previous theme. In other words, this concerns how the participants explained and justified gender inequality. Differences in work division were often described in terms of personalities and interest justifying gender inequalities through a focus on individualism. Women were described as taking on responsibilities, making it difficult for men to do their part. Women were also described as being in charge of family life.

The overarching theme “Dealing with it – individual and relational strategies to handle structural stress” highlights the tension between structural health stressors and gender inequalities on the one hand, and relational health resources and
focus on individualism on the other hand. The caregivers lacked structural support and tried to manage through individual and relational strategies. This overarching theme can be exemplified by the goals and approaches that were formulated by the participants after the focus group discussions (Table 3). The presentation is a purely descriptive compilation of the goals that where formulated by the participants and the approaches to achieve them. All methods constitute different approaches to formalise the relational health resources and make them more permanent. However, none of the methods challenge the main sources of stress that were experienced as out of their own control.

Table 3: Goals and approaches to achieve them formulated by the participants in the focus groups.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain wellbeing and cohesion</td>
<td>To meet regularly in talk groups for support and encouragement</td>
</tr>
<tr>
<td>To increase work satisfaction</td>
<td>Including “doing something extra” for the elderly in the work routine</td>
</tr>
<tr>
<td>Settle unfair division of work and responsi-</td>
<td>Creating routines for continuous evaluation or the responsibilities</td>
</tr>
<tr>
<td>bility in the work group especially concerning assignation of responsibilities beyond the daily caring responsibilities</td>
<td></td>
</tr>
<tr>
<td>Settle the unfair division of work and responsibility in the work group concerning cleaning</td>
<td>Creating specific routines for cleaning</td>
</tr>
<tr>
<td>Maintain wellness at work</td>
<td>Start employee association with social activities</td>
</tr>
<tr>
<td>Increase encouragements in the work group</td>
<td>“One praise a day” project – where all employees should try to compliment co-workers for their work at least once a day</td>
</tr>
</tbody>
</table>

**Patterns of gender equality at workplaces and associations with psychological distress (paper III)**

In the Northern Swedish Cohort psychological distress at age 42 was reported by 39 percent of the women and 27 percent of the men. This was a significant increase of 10 percentage points for women and 4 percentage points for men compared to psychological distress at age 21 before the participants had entered the labour market or early in their career.

Six different patterns of gender equality at the workplace were identified in the cluster analysis. The clusters were named by the main characteristics of their gender equality pattern as presented in Figure 4.
Four of the patterns represent different combinations of gender equality and inequality (C2, C3, C4, and C5). Out of these clusters we considered C5, *Gender Equality in divergent spheres*, to be the most gender equal cluster as these workplaces were classified as gender equal in the divergent spheres of economy and parental leave. However, this pattern also included inequalities as women were in the minority, had a lower educational level and took moderately more days of temporary parental leave. Women and men from the cohort who worked at workplaces in this cluster were strikingly similar in the distribution of socioeco-
nomic position, type of work, occupational sector and psychological distress (figure 5). No significant differences between women and men were found. In this cluster women and men had a lower prevalence of psychological distress compared to the other clusters.

![Figure 5. Distribution (in percent) of psychological distress, socioeconomic position and type of work among the cohort participants in cluster 5: Gender Equality in divergent spheres](image)

The most common gender equality pattern among the included workplaces was C2, *Socioeconomic equality & majority of women*. This was also the only pattern with a majority of women at the workplaces. Women used more days of both types of parental leave compared to men at their workplace, whereas mean salaries and educational level were equal. Women and men in this cluster were fairly similar in regard to socioeconomic position and type of work (figure 6). This cluster had the highest prevalence of psychological distress among men and the second highest prevalence among women in the cohort. For women there was also a significant increase in psychological distress of 16 percentage points between age 21 and age 42.
RESULTS

The workplaces in C3, *Socioeconomic equality & more parental leave for men*, were characterized by gender equality in salary and educational level, whereas men used more parental leave and were in the majority at the workplaces. In the cohort the majority of the women in this cluster worked with people, whereas men mainly worked with things. Compared to the other clusters the psychological distress among women in C3 was low.

The workplaces in C4, *Unequal with equal representation*, had an equal number of women and men, whereas all of the other indicators were unequal. Men had higher mean salaries and educational level, whereas women used most days of both types of parental leave. Among the cohort participants a majority of the women worked with people, whereas working with data was the most common type of work among men. Psychological distress was as frequent as in the total population.

Two of the clusters were unequal on all indicators of gender equality (C1 & C6). C6, *Traditionally unequal*, had a pattern where the workplaces had a majority of men, higher mean salaries for men, lower educational level for men and fewer days of both types of parental leave for men compared to the women at the same workplace. In this cluster women and men differed in socioeconomic position as well as type of work (figure 7). The women in this cluster had the highest prevalence of psychological distress compared to women in the other clusters. Men on the other hand had the second lowest prevalence of psychological distress compared to other men. Differences between women and men in psychological distress within this cluster were also significant.
The other cluster that was unequal on all indicators was C1, *Unequal with higher values for men*; this represented a different pattern where the men used more days of parental leave compared to the women at their workplaces. The few women in this cluster (n=5) makes it difficult to compare women’s and men’s prevalence of psychological distress.

In the main sample of women and men from the cohort, there were significant differences in psychological distress between the clusters (data not shown). However, in separate analysis for women and men, the differences in psychological distress between the clusters were not significant. Multivariate logistic regression analyses were performed with psychological distress as outcome. C5 was used as the reference category as this cluster was gender equal on two indicators in divergent spheres. For men, there were no significant associations with psychological distress in bivariate or multivariate logistic regression analyses (data not shown). For women, belonging to C6 was associated with higher odds for psychological distress in the crude model but not after all controls (table 4). The variable that made the relation insignificant was psychological distress at age 21. C2 was also associated with higher odds for psychological distress among women in the full model (model 3).
Table 4. ORs and 95% CIs for psychological distress (age 42) in relation to the clusters among women.

<table>
<thead>
<tr>
<th>Clusters: C5 (ref)</th>
<th>Model 1 OR (95%CI)</th>
<th>Model 2 OR (95%CI)</th>
<th>Model 3 OR (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>C1</td>
<td>2.00 (0.28–14.20)</td>
<td>1.99 (0.27–14.54)</td>
<td>2.02 (0.27–15.19)</td>
</tr>
<tr>
<td>C2</td>
<td>2.35 (0.98–5.62)</td>
<td>2.23 (0.92–5.42)</td>
<td><strong>2.51</strong> (1.01–6.26)</td>
</tr>
<tr>
<td>C3</td>
<td>0.94 (0.26–3.39)</td>
<td>0.78 (0.21–2.90)</td>
<td>0.95 (0.25–3.63)</td>
</tr>
<tr>
<td>C4</td>
<td>1.60 (0.66–3.90)</td>
<td>1.45 (0.59–3.60)</td>
<td>1.57 (0.61–4.00)</td>
</tr>
<tr>
<td>C6</td>
<td><strong>3.18</strong> (1.13–8.98)</td>
<td>2.79 (0.97–8.05)</td>
<td>2.72 (0.93–7.92)</td>
</tr>
</tbody>
</table>

Model 1: Bivariate
Model 2: Adjusted for psychological distress age 21
Model 3: Adjusted for socioeconomic position, psychological distress age 21, type of work and age distribution at the workplace

**Gender compositions at the workplace, psychosocial work environment and psychological distress (paper IV)**

The gender composition of the workplaces as a single variable was associated with significant differences in psychological distress in the main sample of women and men. The highest occurrence of psychological distress was found in workplaces with a mixed gender composition, whereas workplaces with more men had the lowest occurrence. In separate analyses for women and men the differences between the different types of workplaces were only significant for women (figure 8).

![Figure 8: Percentage of cohort participants reporting any symptoms of psychological distress at workplaces with different gender compositions.](image)

The psychosocial work environment was rather similar in relation to the gender composition of the workplaces; the only variable that differed between workplaces with different gender composition was the status variable “not important
work”. In this variable participants at workplaces with more women were least likely to report their work as not important.

Table 5 provides the results for the logistic regression on psychological distress in relation to work environment factors and gender composition at the workplace. In the full sample all exposure variables except “not important work” were associated with a higher OR after all controls.

Table 5: ORs and 95% CIs for psychological distress (age 42) from analyses in three stata based on workplace gender composition.

<table>
<thead>
<tr>
<th>Workplaces with more men</th>
<th>n = 344 (61 women, 283 men)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 0</td>
</tr>
<tr>
<td>High demands</td>
<td>2.33 (1.40 - 3.87)</td>
</tr>
<tr>
<td>Low control</td>
<td>2.05 (1.23 - 3.40)</td>
</tr>
<tr>
<td>Low support</td>
<td>1.87 (1.11 - 3.15)</td>
</tr>
<tr>
<td>Not important work</td>
<td>1.62 (0.94 - 2.78)</td>
</tr>
<tr>
<td>Looked down upon</td>
<td>1.67 (0.95 - 2.94)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mixed workplaces</th>
<th>n = 149 (76 women, 73 men)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 0</td>
</tr>
<tr>
<td>High demands</td>
<td>2.37 (1.17 - 4.80)</td>
</tr>
<tr>
<td>Low control</td>
<td>1.46 (0.71 - 3.01)</td>
</tr>
<tr>
<td>Low support</td>
<td>1.98 (0.99 - 3.95)</td>
</tr>
<tr>
<td>Not important work</td>
<td>1.76 (0.83 - 3.72)</td>
</tr>
<tr>
<td>Looked down upon</td>
<td>3.43 (1.59 - 7.39)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Workplaces with more women</th>
<th>n = 266 (226 women, 40 men)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High demands</td>
<td>2.21 (1.29 - 3.79)</td>
</tr>
<tr>
<td>Low control</td>
<td>2.07 (1.21 - 3.54)</td>
</tr>
<tr>
<td>Low support</td>
<td>4.05 (2.30 - 7.15)</td>
</tr>
<tr>
<td>Not important work</td>
<td>1.99 (0.98 - 4.04)</td>
</tr>
<tr>
<td>Looked down upon</td>
<td>2.44 (1.32 - 4.50)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>n = 759 (365 women, 296 men)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High demands</td>
<td>2.28 (1.65 - 3.15)</td>
</tr>
<tr>
<td>Low control</td>
<td>1.88 (1.36 - 2.60)</td>
</tr>
<tr>
<td>Low support</td>
<td>2.51 (1.81 - 3.49)</td>
</tr>
<tr>
<td>Not important work</td>
<td>1.66 (1.15 - 2.39)</td>
</tr>
<tr>
<td>Looked down upon</td>
<td>2.26 (1.58 - 3.22)</td>
</tr>
</tbody>
</table>

Model 0: Bivariate for each exposure
Model 1: Adjusted for gender, socioeconomic position and psychological distress age 21
Model 2: Adjusted for model 1 and all other psychosocial work environment exposures in the table.
In the combination of all work environment factors, the factors most associated with psychological distress were high demands and low control at workplaces with a majority of men, low social support and high demands at workplaces with a majority of women, and the status variable of “being looked down upon” at workplaces with a mixed gender composition. Although the psychosocial work environment was not related to the gender composition of the workplaces, the association between psychosocial work environment factors and psychological distress differed.
Discussion

The results from this thesis show that gender equality at workplaces are characterised by complex social patterns related to their position in society and associated with diverse health outcomes. In the workplace setting women and men can face similar or different situations and health conditions which are related to how gender equality is constructed. The discussion of the results will be structured around the four research questions of this thesis.

How are health experiences and gender equality interrelated at workplaces in elder care? (Papers I & II)

The qualitative studies showed that for employees in elder care, gender equality issues and health experiences had a similar pattern with a tension between gendered structures and agency. The theme “Dealing with it – relational and individual strategies to handle structural stress” highlight the struggle of trying to handle stress that is experienced as being out of the own control.

The health stressors and the perception of gender inequalities experienced by the participants were both related to work demands. The employees described health stressors as caused by a work situation with high demands and the workplaces were experienced as having a low status in society with inadequate resources. The high demands at work can be linked to the workplaces position in the gender order with a low status of women’s work and knowledge. Similar health stressors have been described in previous studies on employees in elder care with a demanding work (Gustafsson & Szebehely, 2005; Ron, 2008; Schaefer & Moos, 1996), on-going organizational changes (Fläckman et al., 2009; Gustafsson & Szebehely, 2005; Wiitavaara et al., 2007) as well as experiences of being devalued (Pfefferle & Weinberg, 2008; Suominen et al., 2008). The employees identified the stressors to be connected to the devaluation of women’s work. In that sense the participants identified gender inequalities in society and advocated gender equality in terms of workplaces with mixed gender composition, equal salaries and equal work division, as a matter of fairness and to some degree as a mean to diminish structural causes of stress. The employees experienced the structural stressors as out of their own control. In the demanding situations at work the caregivers were caught between their obligation towards the caretakers and limited resources to perform the needed work.

In the absence of control over the work situation the participants relied on health resources with a relational and individual character. Although the health resources did provide some possible and necessary strategies for the employees
they did not challenge the structural stressors. The health resources were a combination of individual strategies, such as part time work, and relational group strategies of social support. Previous research has identified social support on a group level as a type of collective control that combines work control and social support (Johnson & Hall, 1996). However, in this case the relational health resources were rather a way of coping with the situation than taking control and changing the prerequisites for the work.

The same pattern of coping, that did not challenge the root of the problem, was also present in relation to gender inequality issues. Although structural gender inequalities were identified and considered as unfair by the participants, their own strategies towards gender inequalities in everyday life was to focus on personalities and interests which justified gender inequalities. Again, the strategies can be seen as relational and individual as empathy for others serves as a base for own actions. In both cases the relational and individual strategies are problematic in several aspects that will be discussed below.

First, the relational and individual health resources are vulnerable as they do not challenge the root of the problem. For example, the individual solution of working part time to get more rest from a demanding job can have negative economic consequences in an already low paid job and can be related to an increased burden of unpaid work in the home. The health strategies at the workplaces were focused on behavioural change which risks that individuals are made responsible for consequences that are partly out of their control. Women’s reliance on support as a buffer for stress and men’s higher reliance on control (Beehr et al., 2003; Gadinger et al., 2010) must be seen in the light of available resources. Women’s higher reliance on support can be understood in relation to women’s conditions through putting the structural context of health stressors in focus. The “new public health” suggests that a suitable way forward is to develop health-promoting organizations that redirect the responsibility of health promotion from the individuals and help people to improve their health through supportive environments. For workers the best strategies for improved health is often to improve the basic conditions of their work (Baum, 2008).

Second, the justifying of gender inequalities can hide and normalise gender inequalities and thereby inhibit a gender equal work division. The justification is based on arguments of personalities and interests. However, personalities and interests are developed in gendered structures that limit the agency of individuals. The presentation of a caring self has been identified as a way for working class women to prove their respectability (Skeggs, 1997). This means that being a caring person can be incorporated in the own identity as an unconscious strat-
egy to be recognized and accepted in the social context. In the same line, attentiveness to needs of others, as one aspect of caring, can also be viewed as a survival mechanism for people in subordinated power positions (Tronto, 1989). Justifications of gender inequalities in work division through focus on individual factors such as personalities and interests therefore hides the power structures in which the individual factors are shaped. In relation to paid work similar processes have been described as an intertwining of gender identities and workplace practices (Acker, 2006).

Third, the relational and individual strategies to handle health stressors and gender inequalities can also be connected to the caring activity of the work closely tied to constructs of femininity. Waerness has argued that the rationality of caring, with emotional relations between caregiver and the dependant with the goal of doing what is best for the dependants well-being, is contrasting to the scientific rationality of efficiency and result-orientation that characterises surrounding society (Waerness, 1984). The rationality of caring makes it difficult to motivate resources to care for elderly as it is not coherent with the demands of rationality that the surrounding society is governed by. The lack of structural health resources that the employees experienced can therefore be related to the low priority of this part of the health care sectors. The lack of structural support puts the employees at these workplaces in ethical dilemmas when the inadequate resources make it difficult for them to provide adequate care for the elderly. Driven by the rationality of caring, putting others needs first, the employees put their own health at risk through trying to manage the high demands. This type of covering up for health system flaws in order to protect patients has previously been identified as a health risk for nurses (George, 2008).

How are patterns of gender equality at workplaces associated with psychological distress? (Paper III)

This thesis has identified various patterns of gender equality at the workplaces of the participants in the Northern Swedish Cohort. The patterns were associated with psychological distress among women but not among men. To work at a workplace with a traditionally unequal gender equality pattern was associated with the highest risk for psychological distress among women. However, to work on workplaces with a majority of women but otherwise fairly gender equal pattern was also associated with a higher risk. Workplaces with a pattern which included gender equality in salary and parental leave were associated with the lowest occurrence of psychological distress and also the same occurrences for women and men. I will discuss the results from paper III in relation to three questions. First, why was workplace patterns of gender equality associated with
Discussion

mental health for women but not for men? Second, how can the results be understood in relation to the convergence theory? Third, how can a multidimensional view of gender equality contribute to the understanding of mental health outcomes at workplaces?

Why women and not men?

That the workplace patterns of gender equality were associated with women’s but not with men’s psychological distress can have several explanations. For women, two of the clusters were associated with higher odds of psychological distress compared to the cluster with the lowest levels (paper III). Both clusters represented disadvantaged situations for women but in different ways. First, in the traditionally gender unequal cluster, women’s higher education was not connected to higher salaries. In contrast to the women, men in this cluster had low levels of psychological distress. The results therefore indicate that the higher odds for psychological distress were associated with the disadvantaged situation of women at these workplaces. It has been suggested that being in a gendered minority at the workplace can have consequences for ill-health through pathways of increased stress (Hunt & Emslie, 1998) however, empirical studies of sickness absence have found little support for this theory (Bryngelson et al., 2011; Mastekaasa, 2005). In our cluster analysis the disadvantage situation for women in the traditionally unequal cluster has no equivalent for men, which possibly can explain that the patterns of gender equality were only associated with psychological distress for women. Second, compared to women in the most gender equal cluster, women at workplaces that were fairly equal but had a majority of women also had higher occurrence of psychological distress. The indication of worse health status for women at workplaces with a majority of women compared to women at workplaces with other gender compositions is both supported (Bryngelson et al., 2011) and contradicted (Savikko et al., 2008; Svedberg et al., 2009) by previous research that focus on gender composition as a single risk factor. In our analyses the cluster with a majority of women at the workplace (C2) was associated with a high prevalence of psychological distress for both women and men. The results therefore indicate that it is the situation, per se, that is associated with psychological distress rather than being a woman in this situation. The focus group studies (papers I & II) were performed at workplaces in elder care which represented situations similar to the cluster with a majority of women. The results (paper I) support that the stressors at these workplaces were experienced as mainly structural, affecting both women and men at the workplaces. It is possible that the low status of women’s work in the gender order of society in general can explain the disadvantage of these situations. However, although both women and men seemed to be affected by this disadvantage situation, women are exposed to these situations to a higher extent, simply because the majority of employees at these workplaces are women.
Is there a convergence of health outcomes in similar situations?

The results from our cluster analysis gave some support for the convergence hypothesis, i.e. that similar life conditions for women and men leads to similar health outcomes. In our analysis women and men in the most gender equal cluster were similar in both work characteristics and psychological distress, whereas other patterns with divergent situations for women and men were associated with differences in psychological distress as well. The convergence theory has been analysed in previous research through the association between mortality in accidents and accident-related behaviour finding support for decreased gender differences for some types of behaviour and accidents (Waldron, 2000). But the convergence theory has also been applied and supported in the study of gender equality in couples income and occupation in relation to death and sickness, with low risks for traditional women and progressive men (Månsdotter et al., 2006).

We have only identified one study that analyses the convergence theory in relation to workplaces in which gender equality at work, measured with a gender gap index, is related to more similar levels of sickness absence among women and men (Sörlin et al., 2011b). In our results the most gender equal situation was associated with a similar occurrence of psychological distress among women and men, but also with a low occurrence compared to other situations. The findings suggest that the convergence theory is a suitable model for explaining the relationship to health status at the workplace. However, it does not provide a full understanding and must be complemented to explain the overall level of ill-health.

What can a multidimensional view of gender equality add?

The result from the cluster analysis highlights the multidimensional character of gender equality. For example, women at workplaces with a majority of men only had a higher occurrence of psychological distress when the workplace was unequal in other aspects as well. This indicates that gender equality in numbers alone does not necessarily imply that women and men have the same opportunities, working conditions and mental health outcomes. The characteristics of the clusters therefore highlight the importance of utilizing a multidimensional view of gender equality where several dimensions are taken into account. These results can give new insights into studies that focus on single risk factors such as gender composition of the workplace. Although the gender composition of the workplace can be connected to differences in health outcomes the workplaces with a mixed gender composition are not necessarily gender equal in other aspects. In fact the results from the cluster analysis indicate that workplaces with an equal representation of women and men are unequal in all other aspects of gender equality measured in our study. The divergent occurrence of psychological distress for women and men at workplaces with a mixed gender composition in paper IV also suggests that these workplaces are not gender integrated in terms of constituting
similar situations for women and men. Although the cluster analysis takes several dimensions of gender equality into account, this type of operationalization also excludes other dimensions of gender equality that can be of importance for health experiences. The results from the focus groups (papers I & II) show that structural gender equality issues, part of the gender order of society, can help us understand the disadvantage situations at workplaces with a majority of women, rather than gender equality issues on the own workplace that are part of the gender regime.

What is the importance of the gender composition of a workplace for the association between psychosocial work environment and mental ill-health? (Papers IV, III & I)

Paper IV showed that the associations between psychosocial work environment and psychological distress differed in relation to the gender composition of the workplace, which to our knowledge has not been shown before. The factors most strongly associated with psychological distress were high demands and low control at workplaces with a majority of men, low social support and high demands at workplaces with a majority of women, and the status variable of “being looked down upon” at workplaces with a mixed gender composition. Future research needs to focus on possible explanations for how these results can be understood. A tentative explanation could be that the gender composition of a workplace is part of a gender regime in which the importance of work environmental factors is shaped in gendered relations of power, work divisions, emotional and symbolic relations (Connell, 2006). We will discuss how the gender regime could shape the associations between psychosocial work environmental factors and health status of different types of workplaces.

At workplaces with a majority of women the results from paper IV, where social support represented the strongest association with psychological distress, can be understood in terms of women being expected to be supportive and caring towards co-workers. The importance of social support was also supported by the results from paper I where support from the workgroup was identified as a health resource for the employees at workplaces in elder care with a majority of women. In research on health care professionals, a sector with a majority of women, stress of conscience for not being able to provide the care that the patient is in need of is increasingly discussed and related to burnout (Dahlqvist, 2008). The expectations on women to be caring and attentive can also be associated with sacrifices for women with consequences for the own health (Forssén et al., 2005; Skeggs, 1997; Tronto, 1989). Expectations on women to be responsive to other people’s needs, independently of their own situation, has been referred to as “compulsive
sensitivity” and has been suggested to be connected to women’s ill-health (Fors-sén et al., 2005). However, our results in paper IV indicate that low social support is associated with psychological distress for both women and men at workplaces with a majority of women. The results therefore indicate that it is the gendered organization that creates this situation rather than gender roles of women and men which has been suggested before (Beehr et al., 2003; Gadinger et al., 2010).

The gender regime or work culture has also been suggested to be expressed in attitudes towards sickness absence (Hensing & Alexanderson, 2004; Mastekaasa, 2005). One of these studies showed an association between open communication at the workplace and an increased number of sick-leave spells among women in Sweden (Hensing & Alexanderson, 2004). The authors suggest that the open communication can be connected to an absence culture in which the employees encourage each other to prioritize their own health status in situations with high strain at work or at home, and therefore have a more tolerant attitude towards sickness absence. The results from paper IV concerning workplaces with a majority of women also show that a low level of control was not associated with psychological distress in the fully adjusted model. A previous study has suggested that workplaces with a majority of women represent a situation with a limited overall possibility to influence the job that the control measures fail to recognize (Waldenström & Härenstam, 2008). This could mean that control could be beneficial for health status at these workplaces, but that the low influence over work overall limits the association with psychological distress.

At workplaces with a majority of men, paper IV showed that it was the classical psychosocial work environment factors of high demand and low control that was associated with psychological distress, whereas social support had no importance. A tentative explanation could be that social support is not expected to the same degree as at workplaces with a majority of women and therefore that the effects of low support are less pronounced at workplaces with more men. Also, it is possible that social support is more needed in caring professions. It is possible that the work culture at workplaces with a majority of men is shaped by masculine ideals that include expectations of being able to manage demands through control over the situation and being independent (Connell & Messerschmidt, 2005).

At workplaces with a mixed gender composition women were more likely to report psychological distress compared to the women at workplaces with other gender compositions. That gender composition has a stronger association to poor health and sick leave for women than for men is consistent with several previous studies on the occupational level (Hunt & Emslie, 1998) and workplace level (Bryngelson et al., 2011; Mastekaasa, 2005). This result contradicts previous research that suggests better health status in those few occupations that are gender-inte-
The higher prevalence of psychological distress for women compared to men at workplaces with a mixed gender composition in paper IV could be an indication of that the mixed workplaces are not gender integrated and that women and men at these workplaces have very different situations at work and/or in relation to unpaid work. The result that more women at these workplaces report a low level of control strengthens such interpretation. Previous research has also shown that there is a segregation between women and men working with data and that women do more administrative routine work with low control (Härenstam et al., 1999). The results from paper IV indicate that workplaces with a mixed gender composition are not gender integrated, but rather gender segregated with different work situations for women and men. These results are also supported by paper III where the cluster with a mixed gender composition was unequal in all other gender equality indicators. At workplaces with a mixed gender composition the status variable “being looked down upon” was associated to psychological distress in the full model, whereas the traditional psychosocial work environmental factors (demand, control and support) were not. These results highlight the importance of a continued development of indicators of psychosocial work environment factors that are gender sensitive and adequate for various settings. The strong association between “being looked down upon” and psychological distress at workplaces with a mixed gender composition suggests that status variables need further attention. A tentative explanation for these associations could be that that status to a higher extent is something you have to achieve at these workplaces, whereas employees at workplaces with a majority of women and men have more of a self-evident position in the hierarchy. However, more research is needed to understand these findings.

What types of gender regimes are present at the workplaces and how are they related to women’s and men’s health experiences? (Papers I, II, III & IV)

In this thesis gender theories have been used when formulating the research questions as well as in interpreting the results of the empirical findings. In this section I will outline how gender perspectives can contribute to the understanding of health experiences in a workplace setting through focusing on gender regimes. I will discuss gender equality as a part of a gender regime of a workplace that is constructed in relation to the surrounding gender order of society (Connell, 2006; Connell, 2002) and connected to health opportunities and constraints (Schofield et al., 2000). The results from this thesis have shown a variety of gendered workplace settings with diverse associations to health experiences. The results indicate that workplace gender equality is connected to similar situations and health experiences for women and men. Workplace gender inequality on the
other hand seems to be connected to different situations and diverse health outcomes. Below I will discuss four types of gender regimes that have been identified in this thesis and how they relate to health experiences.

The unfavourable gender regime
One of the settings with similar health outcomes for women and men was workplaces with a majority of women which has been analysed in all of the papers. In relation to health experiences these settings seem to represent an unfavourable gender regime. At the workplaces in elder care (papers I & II) the gender regimes seemed to be shaped by their position in the gender order of society as low status workplaces with a majority of women. The position in society seemed to be decisive for the health stressors that the employees experienced as well as to their response to the stress with relational health resources. The focus group studies included a range of examples of how the employees experienced powerlessness as part of their situation. The powerlessness, or lack of control over the own situation forced them into individual behavioural health-related strategies. In these situations all employees, both women and men, seemed to be affected by structural stressors. The quantitative papers (III & IV) pointed in the same direction as women and men at workplaces with a majority of women tended to have similar levels of psychological distress. In the focus group studies (papers I & II) work group relations were also central for the participants who experienced strength from the work group and satisfaction of caring as defences against the health stressors. The emotional commitment toward colleagues and care-takers also increase the risk of creating obligations towards them where own needs risk being swept aside. Thus emotional relations can be both favourable and hostile (Connell, 2002). Although there were also gender inequalities in the distributions of work tasks and responsibilities at these workplaces, the main health stressors seemed to be connected to the low status and unfavourable societal position of these workplaces.

The beneficially integrated gender regime
Another setting with similar health outcomes for women and men was the cluster of workplaces that were gender equal in the divergent spheres of salary and temporary parental leave (paper III). These workplaces represent a beneficially integrated gender regime with similar associations to psychological distress for women and men, as well as a low prevalence of psychological distress. The work characteristics of women and men at these workplaces were also strikingly similar overall. The characteristics of these workplaces therefore give some support for the convergence theory, suggesting that similar life circumstances for women and men would lead to similar health experiences.
The advantageous men gender regime
One of the settings with different health outcomes for women and men was the workplaces in the traditionally gender unequal cluster (paper III). At these workplaces women were worse off in terms of psychological distress. In the traditionally gender unequal cluster it is apparent that the unequal setting poses an unfavourable situation for women that can possibly explain the association to psychological distress. The workplaces in the traditionally gender unequal cluster therefore represent an advantageous men gender regime where women are present but face an adverse situation associated with psychological distress.

The gender regime of subtle segregation
Another setting which perhaps more surprisingly is associated with different health outcomes for women and men, was workplaces with a mixed gender composition (paper IV). Here too women were disadvantaged health wise with a higher prevalence of psychological distress compared to the workplaces with other gender compositions. However, in the mixed workplaces it is more difficult to determine what it is in the situation that made the association to psychological distress so strong for women. A larger proportion of the women at these workplaces report a low level of control which may indicate a different work situation compared to men. In paper III the only pattern of gender equality that includes a mixed gender composition is unequal in all other indicators of gender equality, which indicates that gender equal representation of men and women does not imply a gender equal workplace. These workplaces can be labelled as representing a gender regime of subtle segregation, however, further attention is needed to adequately describe the gender regimes in these settings.

Methodological considerations
This thesis uses triangulation of methods combining qualitative focus groups studies and quantitative epidemiological studies. The triangulation enables a more comprehensive analysis of the phenomena under study through providing answers to different kinds of questions (Patton, 2002). The quantitative method was chosen to be able to draw conclusions that are valid for a larger population than the studied. The method also allows analyses of associations between exposures and outcomes after control for confounders. Thus, questions about causality can more easily be judged. Qualitative methods were used to get deeper knowledge and understanding about the new research field of this thesis. These methods enabled us to explore the attitudes towards, as well as experiences, feelings and expectations of gender equality and work-related health.
Validity and transferability of the qualitative study

In the qualitative focus group studies validity was considered in design, data collection, and analysis. The study design of inviting all employees at the included workplaces to participate is a quite rare approach in qualitative research. The fact that the majority did not participate was mainly due to the work overload at their workplace, which has been shown to be a problem in other studies at nursing homes (Mawn et al., 2010). In the focus groups the participants were accompanied by some co-workers from the own workplace, whereas other participants in the focus group came from another workplace. The combination of pre-existing and new groups had several advantages. To be accompanied by co-workers from their own workplace created a familiar and secure setting for the participants and also gave some insight to workplace relations as a context in which ideas are formed and decisions are made (Kitzinger, 1994). To meet people from other workplace in the focus groups made it possible to lift the discussion from the own workplace. The sharing of experiences between workplaces was also appreciated by the participants. However, the mixed groups required transport for some participants to another workplace which was inconvenient and probably had negative effects on the participation.

During data collection the moderators worked actively to create an open, friendly and accepting environment to ensure a variety of opinions, views and experiences in the discussions. Each focus group was started with the moderators stating that everyone’s experiences and views were valuable.

In the analysis process the researchers repeatedly returned to the transcripts to confirm the interpretations and strengthen the validity. I conducted the coding process in discussions with the other researchers to ensure a high level of coding consistency (Kidd & Parshall, 2000).

The results are expected to be transferable to similar settings. In a global perspective caring for the elderly is often performed by women as a part of the domestic work. More research is needed to determine whether our results are transferable on a wider scale of domestic elder care. However, public health researchers within the field of women’s work have argued that the occupational health knowledge is relevant for both paid and domestic spheres as this knowledge considers risks for caregivers from the tasks they carry out and the environments that they work in (Lloyd, 1999). Low status and feelings of “reaching the limit” would probably have an even more severe negative impact on the caregivers’ health experiences in a domestic setting because of the worldwide low status of domestic work (Doyal, 1995) and the lack of frames for the domestic caregivers commitment.
Validity and generalizability of the quantitative studies

The questionnaire is based on well-known and validated questions and scales (Hammarström & Janlert, 2011). The health outcome of psychological distress (measured with a six-item index) is used in both quantitative studies. To construct an exposed group, we have used a cut-off close to the 75th percentile which means that one symptom is enough to be categorised as distressed. A previous study has shown that both severe and less severe complaints of psychological distress are related to later ill-health and all-cause mortality (Ringbäck Weitoft & Rosen, 2005).

Gender equality is operationalized through five indicators based on available register data. The use of register data ensures high reliability and a high quality of data. A limitation is the lack of register data on other important aspects of gender equality such as hierarchal positions, part-time/full-time employment, and sexual harassments. However, the advantage of register data is that it could serve as a practical and cost-effective measurement of gender equality at the workplace level, that outlines several important aspects of gender equality. There are two available levels of workplace data in the Swedish registers. We used data for the workplace level which consists of employees registered in the same organization at the same street address. The other available level of data was the organizational level, where one organization can have workplaces at different geographical locations. The settings focus in this thesis make the workplace level more adequate, as it constitutes the specific work environment for the employees.

The Northern Swedish Cohort is a homogenous group in terms of age and geographic location. However, the labour market structure of Luleå is comparable to Sweden as a whole with regard to the distribution of branches and the sample can therefore be considered as representative for Sweden (Statistics Sweden, 2012). The cohort has also proven to be comparable to the country as a whole with regard to socio-demographic and socio-economic factors as well as health status and health behaviours (Hammarström & Janlert, 2011). However, the specific conditions of the Swedish setting with a high participation rate of women in the labour market, extensive parental leave insurances and a public support for gender equality at the workplace makes the generalisations of the results to other settings limited.

Strengths and limitations

The focus group method in papers I & II is focused on experiences of gender equality and health on a group level. The strength of this approach is that it can capture discourses around the phenomena in focus. A possible methodological
Discussion

A major strength of the epidemiological studies is the high quality of data from a longitudinal cohort with extraordinary high response rate. The longitudinal cohort design makes it possible to adjust for previous psychological distress which has not been possible in previous cross sectional studies (Hensing & Alexander- son, 2004; Svedberg et al., 2009). The questionnaire data also allows us to use psychological distress as health outcome which is a more direct measure of health status compared to sickness absence which many previous studies have used.

The cluster analysis (paper III) contributes to the contextual understanding of how patterns of gender equality at workplaces are related to psychological distress. By using the method of cluster analysis, we were able to include the direction of the gender inequalities, i.e. if women or men have higher values on the measured indicator. Furthermore, the cluster analysis enables us to consider a combination of several different indicators of gender equality that are at play simultaneously in the settings where people work. But the study design in the cluster analysis article also has some limitations. Psychological distress as well as socioeco- nomic position is only available for the participants in the cohort and not for all employees at the workplaces. Another limitation is the small number of participants in each cluster, which increases the risk of type two errors. This could possibly explain why there were no significant results for men.

A possible limitation of the study on gender compositions of workplaces (Paper IV) is that both exposures and the health outcome are self-reported. However, although it is possible that respondents with poor health also report worse psychosocial work environment, there is little reason to believe that such “over reporting” would differ between the gender composition strata which is the main focus of this study. The small groups of women and men at workplaces where they are in minority are also a limitation, which increases the risk for type two errors.
Conclusions

This thesis identifies various workplace patterns of gender equality and how they are related to health experiences. In the quantitative analyses patterns of gender equality at workplaces were associated with psychological distress for women, but not for men. A possible explanation is that the disadvantages that women face at gender unequal workplaces have no equivalent for men.

Workplaces with a majority of women seem to be associated with ill-health experiences among both women and men working under these conditions. Although the main health stressors for the employees in elder care seem to be structural and related to the low status in society, the caregivers utilize mainly individual strategies to handle the stress. The individual strategies are problematic as they do not challenge the structural root of the problem and justifies gender inequalities.

Similar work characteristics for women and men seem to co-occur with gender equality in salaries and parental leave. These workplaces were also related to a low prevalence of psychological distress, among both women and men. The characteristics of these workplaces give some support for the convergence theory, suggesting that similar life circumstances for women and men are associated with similar health experiences.

It may seem surprising that workplaces with a mixed gender composition were associated with the highest prevalence of psychological distress (among women only). However, in spite of having a mixed gender composition these workplaces are often characterised by other types of gender inequalities. Our findings highlight the need for a multidimensional view of gender equality as well as a continued development of gender sensitive indicators of the psychosocial work environment.

The thesis shows that workplace gender equality is of importance for the distribution of health experiences among women and men. Gender perspectives highlight the importance of gender relations in research on work-related health. Gender inequalities at workplaces can be part of the explanation to women’s worse self-rated health.
Policy implications

This thesis suggests that workplaces are important arenas for health promotion activities. However, in order to address the workplaces with gendered health inequalities, health promotion needs to start with analysing workplace gender equality patterns. A multidimensional view of gender equality is needed for a comprehensive understanding of the situations for women and men at the workplaces. The indicators used in this thesis can serve as a starting point for such analysis. The advantage with these indicators is that they are derived from registers and are easily assessable for all workplaces in Sweden.

Sweden has good prerequisites to work with gender sensitive health promotion at the workplace level. The fourth objective domain in the Swedish Public Health Policy is “health in working life” and gender perspectives are identified as an integral part of the policy. This thesis further stresses the importance of shifting from individual focus towards structural solutions of improved working conditions.
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