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Health and the Elusive Gender Equality

Can the impact of gender equality on health be measured?

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2011



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The photo on the cover depicts Kid Sörlin (born Nodén) and was taken in Gothenburg, Sweden 1929.

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To my family, Ted, Johanna and Björn

*In memory of my mother, Kid Sörlin,
the best role model a daughter may have.
In the picture on the cover, she is five years old
and has just begun her life's journey. I want to
thank her and all the other strong women who paved
the way for a more gender equal society.*

Table of Contents

Abstract	1
Glossary and Definitions	3
Sammanfattning på svenska.....	7
Original papers	9
Introduction.....	11
Background	13
Aims	17
Thesis overview	19
Conceptual framework.....	21
Multicultural science	21
Three theories important for this thesis.....	23
Health theory	26
Health.....	27
Public Health	28
Measurements of sickness absence and health.....	30
Gender theory	31
Gender equality	33
Measurements of Gender Equality	37
Materials and methods	39
Methodological approach and general design	39
The cross-sectional register study.....	40
Study design.....	40
Data sources	40
Measuring gender equality	42
Analyses	43
The cross-sectional survey study.....	45
Study design.....	45
Sample.....	45
Frame Imperfections	45

Response rate	45
Non-response.....	46
Questionnaire.....	46
Analysis.....	49
Ethics.....	52
Results	53
Different measures of gender equality	53
Results in summary	53
Results case by case.....	54
Comparing gender equality	57
Gender equality at work.....	58
Gender equality between couples.....	58
Gender differences	59
Gender equality	59
Health.....	60
Discussion	61
The theory of eco-social embodiment.....	61
The theory of convergence.....	62
Theory of justice to gender.....	64
Methodological considerations.....	67
Strengths and limitations.....	67
Reliability	69
Validity	69
Conclusions	70
Future research and implications for action	71
Acknowledgements.....	73
References.....	77
Appendix	87

Abstract

Background: All over the world men and women show different health patterns, and there can be many and various reasons for these differences. This thesis therefore evaluates the impact of gender equality on health. To do this, we must be able to measure gender equality. In this thesis, we develop two new measurements of gender equality and evaluate the relationship between gender equality and health.

Methods: Two cross-sectional studies, one register-based and one survey study, are used to compare different measurements of gender equality and different measurements of health, and the relationship between them. Differences between men and women in relation to health outcome are also discussed in the thesis. The register study, comprising 1 097 202 individuals, is based on public registers and includes information on workplace, income, sickness absence, full-time/part-time work, level of education, parental leave and temporary parental leave. A gender equality measurement, the Organizational Gender Gap Index or OGGI, was constructed and 123 companies in two sectors were ranked using the index. Employees in 21 of the most and least gender-equal companies were invited to participate in a survey. A second gender equality index was constructed based on respondents' own reports regarding gender equality in their partner relationship. The variables measured were income, full-time/part-time work, educational level, and responsibilities for and sharing of household duties and parental leave. Both indices were evaluated using the single question: How gender equal is your workplace/your relationship with your partner? The four measurements were dichotomized and tested for a relationship to health. Health was measured by three different measurements: register-based sickness absence, self-reported sickness absence in the past year, and self-rated health.

Results: The thesis has produced two new measurements of gender equality, described above. On gender equality in the partner relationship, we found a difference between men and women. Men perceive higher gender equality than they report, while women report more gender equality than they perceive. When it comes to gender equality at work, we found that employees perceive their company to be more gender equal than the OGGI index shows. This thesis confirms the findings that men have better health than women regardless of measurement. However, in this study we also found that increased gender equality decreases these differences. If employees perceive their company to be gender equal, they have higher odds of rating their health as good, and this is especially so for women.

Conclusion: This thesis supports the hypothesis that differences in health between men and women can be related to a lack of gender equality. When men and women have different possibilities and power to shape society and their own lives, their health will be affected through embodiment of both biological and sociological determinants in accordance with the eco-social theory. Increased gender equality will decrease the differences in health between men and women through convergence. The theory of convergence explains why men and women are affected differently by greater gender equality. Greater gender equality will also decrease the social injustice between men and women and improve justice in accordance with the theory of justice to gender.

The differences found between the indices and the single question on perceived gender equality make clear the need for "hard facts" as a complement to people's own views on gender equality.

Glossary and Definitions

Bias	Systematic distortion of results or findings from the true state of affairs. Conflict of interest.
CI	Confidence interval. The range within which the true value of a variable such as mean, proportion, or rate lies, with a probability that can be calculated using statistical methods.
Confounding	Distortion of an apparent effect by the operation on that effect of factors whose individual effects cannot be separated.
Cross-sectional study	A study that examines the relationship of health to other variables of interest at a particular time without regard for past conditions; thus a prevalence study.
Determinant	A definable entity that causes, is associated with, or induces a health outcome.
Dichotomous	In this thesis, dichotomy means the distinction of measurements into two groups on an ordinal scale, e.g. a “good” and a “bad” group.
Equality	In this thesis equality means the state of being equal, especially in status, rights and opportunities.
Equity	The quality of being fair and impartial.
Evaluation	Efforts aimed at determining as systematically and objectively as possible the effectiveness and/or impact of health-related activities in relation to objectives, and taking into account the resources and facilities that have been deployed in the activities being evaluated.
Factor analysis	Statistical methods and procedures for seeking patterns of interrelationships among variables by grouping those that correlate, using analysis of correlations among sets of variables, such as scoring systems for rating scales used in surveys.
Feminist theory	Gender research focusing on women and the effects of normative gender systems.

Gender Gap	The discrepancy between the numbers of men and women; can be used to show differences in demographics, salaries or in various trades and professions.
Gender equality	Men and women having the same status, rights and obligations.
Logistic regression	Sometimes called the logistic model or logit model. Used for prediction of the probability of the occurrence of an event by fitting data to a logit function logistic curve.
Odds	The statistical calculation of the number of events as a fraction of non-events or as a fraction of all that are possible.
Odds ratio, OR	The ratio of two odds. Used in the analysis of data from a calculation (case-control study), yielding an approximate value for the relative risk.
Power estimation	The capacity of a scientific study to demonstrate the strength of statistical association between variables.
Register study	Research based on variables from registers, which are data files containing information about all the identified cases of a population.
Reliability	The characteristics by which a measuring instrument or procedure yields a series of identical or very similar measurements of the same variable that is repeatedly measured by the same observer using the same instrument or procedure.
Sickness rate	Sickness absence with social security benefit (1/10=600000).
SAS file	Statistical Analysis System, a statistical program widely used in public health.
SPSS program	Statistical Package for Social Sciences, sometimes called PASW Predictable Analytic Software.
Stata program	Statistical and data statistical program used by researchers in for example epidemiology, biomedicine and the social sciences.

Survey study	An investigation in which information is collected systematically but often without a formal research design to test a hypothesis. Surveys often consist of questionnaires or interviews.
SQL	Structured Query Language. Relational database management system.
Validity	The extent to which a measurement actually measures what it purports to measure.

This glossary is mainly derived from:
Folkhälsovetenskapligt lexicon, 2000 U. Janlert
A Dictionary of Public Health, 2007 J.M. Last

Sammanfattning på svenska

Bakgrund: Över hela världen har kvinnor och män olika hälsomönster så också i Sverige. Den här avhandlingen undersöker vilken roll bristen på jämställdhet spelar för dessa skillnader i hälsa mellan könen. För att kunna undersöka jämställdhetens påverkan på hälsa måste jämställdhet kunna mätas. För definition av jämställdhet har den Nationella Svenska Jämställdhetsplanen, antagen av Riksdagen 2006, använts. I avhandlingen beskrivs utvecklandet av nya jämställdhetsmått och två studier där relationen mellan jämställdhet och hälsa belyses.

Metod: Två tvärsnittsstudier, en registerstudie och en enkätstudie, har använts för att jämföra olika mått på jämställdhet och på hälsa samt relationen mellan dessa. Skillnader i fördelningen av så väl hälsa som jämställdhet mellan kvinnor och män studeras också. Registerstudien baseras på ett utdrag ur befolkningsregistret som förutom bakgrundsvariabler också innefattar information om arbetsplats, lön, sjukfrånvaro, tjänsteomfattning, utbildningsnivå och föräldraledighet, innehållande 1 097 202 personer. Ett jämställdhetsindex, Organizational Gender Gap Index - OGGI innehållande jämförelser mellan män och kvinnor på organisationsnivå skapades och 123 företag i två tjänstesektorer rankades med detta index. De anställda i 21 av de företag som var mest jämställda och de minst jämställda, inbjöds att delta i en enkätstudie. I enkätstudien skapades ytterligare ett jämställdhetsindex, baserat på självrapporterade uppgifter avseende skillnader i lön, i utbildningsnivå, i tjänsteomfattning samt i fördelning av tid och ansvar i den egna parrelationen. Båda indexen har jämförts med den enkla frågan: Hur upplever du jämställdheten på ditt företag/ i din relation? Alla fyra jämställdhetsmåten dikotomiserades och testades för sina samband med hälsa. Hälsa mättes med tre mått, registerbaserad sjukskrivning över 14 dagar, självskattad sjukfrånvaro det senaste året samt självskattad hälsa.

Resultat: Avhandlingen har resulterat i två nya jämställdhetsmått. Avseende jämställdhet i den egna parrelationen så upplever män högre jämställdhet än de rapporterar, medan kvinnor rapporterar högre jämställdhet än de upplever. När det gäller jämställdheten på företaget så upplever de anställda företaget som mera jämställt än indexet som baseras på registerdata visar. I denna avhandling har män har bättre hälsa än kvinnor oavsett hälsomått. Om de svarande upplever sitt företag eller sin parrelation som jämställd så är det högre odds att man också upplever sin hälsa som god. Ökad jämställdhet på företagsnivå mätt med OGGI minskar skillnaderna i hälsa mellan kvinnor och män.

Inget av jämställdhetsindexen vare sig på organisationsnivå eller på parrelationsnivå visar några samband med den enkla frågan om jämställdhet. De anställda upplever sina företag som mera jämställda än vad registerdata visar. Män upplever sina relationer som mera jämställda än vad som rapporteras vara den praktiska verkligheten. Kvinnor däremot rapporterar högre grad av jämställdhet än de upplever. Denna skillnad i upplevelsen av jämställdhet kan utgöra den praktiska konsekvensen av att jämställdhet avspeglar makt och inflytande och att maktlöshet och brist på inflytande är avgörande för hälsan. Sambandet mellan jämställdhet och hälsa ser också olika ut för kvinnor och män. Hälsan förbättras när jämställdheten ökar med de mått som här använts undantaget när jämställdheten mätts med OGGI och hälsa mätts med ”sjukskrivning mer än 14 dagar på organisationsnivå. Dock minskar även i detta fall skillnaderna mellan kvinnors och mäns sjukskrivning när jämställdheten ökar.

Slutsatser: Avhandlingen ger stöd för tesen att skillnader i hälsa mellan kvinnor och män delvis kan härledas till brist på jämställdhet. Följande två teorier är avgörande för denna slutsats. När män och kvinnor ges olika förutsättningar och makt att forma sina liv och att delta i samhällets utveckling påverkas, i enlighet med "Eco-social theory of embodiment", deras hälsa genom förkroppsligande av såväl biologiska som sociala bestämningsfaktorer. Ökad jämställdhet kommer att minska skillnaderna i hälsa mellan kvinnor och män genom konvergens d.v.s. ett närmande av värden mot mitten – teorin om konvergens. I avhandlingen framgår att skillnaderna är tydliga mellan de normativa jämställdhetsindexen och den direkta frågan om upplevelse av jämställdhet är. Detta motiverar slutsatsen att normativa mått är värdefulla för framtida forskning.

Original papers

This thesis is based on the following papers:

- I. Sörlin A., Öhman A., Blomquist Y., Stenlund H., Lindholm L., 2011 *Measuring the gender gap in organizations* (Gender in Management – an International Journal 2011 26:4)
- II. Sörlin A., Öhman A., Lindholm L., 2011 *Sickness absence in gender-equal companies – A register study at organizational level* (BMC Public Health 2011 11;513)
- III. Sörlin A., Öhman A., Ng N., Lindholm L., 2011 *Do gender-equal workplaces contribute to good health?* (Submitted October 2010)
- IV. Sörlin A., Lindholm L., Ng N., Öhman A., 2011 *Gender equality in couples and self-rated health – A survey study evaluating measurements of gender equality and its impact on health* (International Journal for Equity in Health accepted for publication 2011-08-21)

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Paper II and paper IV BioMed Central Ltd

Table 1 Overview of the thesis. Papers I-IV

	Paper I	Paper II	Paper III	Paper IV
Title	Measuring the gender gap in organizations.	Sickness absence in gender equal companies - A register study at organizational level.	Do gender-equal work places contribute to good health?	Gender equality in couples and self-rated health - A survey study evaluating measurements of gender equality and its impact on health
Aim	To present a register-based index that could provide a practical tool for gathering information and increasing our knowledge on gender equality at organizational level.	To answer the research questions; Does increased gender equality reduce the numbers of days on sickness benefit at company level? Is the impact of gender equality at work different for men and women?	To investigate potential associations between gender equality at work and self-rated health.	To analyze the association between gender equality in a couple relationship and self-rated health. The study also evaluates the impact of gender equality measurements used.
Study	Cross sectional Register study	Cross sectional Register study	Cross sectional Survey study	Cross-sectional Survey study
Health measurement	None	Days on sickness benefit	Self-rated health	Self-rated health
Gender equality measurement	1)OGGI index	1)OGGI index	1)OGGI index 2)Self-perceived gender equality at work	1)Self-reported gender equality in the couple relation 2)Self-perceived gender equality in the couple relation
Result	Added together, the selected variables provide results that are sufficiently different to enable ranking.	In gender-equal companies, the risk for days on sickness benefit was 1.717 (95% CI 1.612-1.828) higher than in gender-unequal companies.	No associations were found between OGGI and self-rated health. Women who perceived their company as equal had higher odds of reporting good health (OR=2.8, 95% CI = 1.4 – 5.5).	Men and women perceive and report gender equality differently. This makes it necessary to be aware of the methods used to quantify men's and women's opinions.

Introduction

The subject of this thesis is the differences in health patterns between men and women and their possible connections to gender equality. The unequal distribution of health in the population is of major interest for public health research and policy. The gender distribution pattern is well known: women live longer but have more reported ill health than men (Schofield, 2002; Statens Folkhälsoinstitut, 2010; World Health Organization, 2010b).

The challenging difference in health outcome observed between men and women in Sweden has resulted in particular interest nationally (Hammarström & Hensing, 2008). The focus of interest and suggested solutions, as always, depend on perspective. Different explanatory models have been put forward at different times (Johansson, Christiansson, & Dahlquist, 2009). Many researchers and politicians have sought greater knowledge on the underlying causes of the observed differences in health (Swedish National Institute of Public Health, 2004). One of the outcomes of this difference in health between men and women is that Swedish women have a much higher absence from work than men (Angelov, Johansson, Lindahl, & Lindström, 2011). This is argued to affect economic growth and societal development (Hausmann, Tyson, & Zahidi, 2010). In 2005, Vinnova (a Swedish government research agency linked to the Ministry of Enterprise, Energy and Communication) called for public health research in the field of gender equality. A research group from Umeå University received funding to assess the following hypothesis: whether lack of gender equality was one of the reasons why Swedish women showed much higher rates of sickness absence than men, and whether this absence led to reduced economic growth. To evaluate the possible influence of gender equality on health, we must be able to measure gender equality. This doctoral thesis was a project within a larger project: the task of the doctoral project was to find measurements for levels of gender equality. If lack of gender equality at home and at work is one of the reasons for the observed health differences, then measurements are required. Metrics that can measure gender equality quickly, easily and cost-effectively would be of considerable benefit.

Background

Health inequities

In this thesis *equity* is used as a synonym for justice and fairness, while *equality* is used to mean having equal status, rights and opportunities, with special focus on men's and women's equal power to shape society and their own lives.

Health is unequally distributed in the population all over the world (World Health Organization, 2010b). The differences can be seen both internationally and intra-nationally – between social groups, between different age groups, and between men and women, for example. These social inequities in health are well documented (Marmot, 2006; Schofield, 2007). Some are increasing but fortunately others are decreasing: global mortality rates for children under five years decreased by 30% between the 1980s and 2008, tuberculosis treatment has been successful, and fewer people are contracting HIV (World Health Organization, 2010b). Despite these encouraging trends, regional and national averages conceal large differences. The less poor areas show the greatest reductions in child mortality; however, the risk of dying of complications during pregnancy and childbirth remain highest in Africa. The gaps between rich and poor within countries correlate to the health of the populations (Wilkinson & Pickett, 2009). Thus, such inequities remain a major problem for public health. The social inequities are connected to the so-called social determinants of health. In 2008, the World Health Organization (WHO) published a report arguing that health equity should be achieved through action on the social determinants of health (Commission on Social Determinants of Health, 2008). The commission was chaired by Professor Michael Marmot, a well-known public health researcher. Marmot et al. argue that gender inequities damage the health of millions; they highlight that girls and women are especially vulnerable through unfair divisions of work and leisure, differences in decision-making power, and overall differences in the possibilities of improving one's life (Marmot, Field, Bell, Houweling, & Taylor, 2008). In September 2000, 189 member states of the United Nations agreed upon eight Millennium Development Goals to end poverty by 2015. Goal number 3 is to “Promote gender equality and empower women”. The aim is to begin by eliminating gender disparity in primary and secondary education by 2005, and in all levels of education by 2015. Although, difficulties in achieving this goal can already be seen, gender equality remains on the agenda in a common agreement signed by 189 nations (World Health Organization, 2010a).

Together with the other Nordic countries, Sweden is considered to be among the most gender-equal nations in the world (Hausmann, et al., 2010; United Nations Development Programme, 2010). Nevertheless, we still see gender differences affecting both men and women. Regarding health, although Swedish

men and women still show different patterns of morbidity and mortality, the differences appear to be declining. In 2010, women had an expected survival at birth of 83.5 years and men 79.5 years. In 1983, the figures were 79.6 and 73.6 years, respectively. This means a reduction of the difference in expected survival at birth from 6 to 4 years between 1983 and 2010 (Statistics Sweden, 2010a). This could be regarded as a sign of convergence in mortality rate between the sexes. Can the same convergence be seen in the morbidity rate? Measuring the morbidity rate is somewhat more complex, and a variety of measurements are available. Sickness rate (page 4) is a measurement used in Sweden, and the difference between men and women has decreased from the all-time high in 2006 where levels were 35.2 for men and 52 for women. At the end of 2009, they were 26.7 for men and 39 for women – a decrease of 8.5 for men and 13 for women. Here, too, the convergence can be seen. Nevertheless, women still report worse ill health and have higher healthcare utilization (Statens Folkhälsoinstitut, 2010); these differences between the genders present a challenge to national public health and are the main topic of this thesis.

Swedish gender equality in policy and law

In itself, the concept of gender equality confirms the heteronormative division of most societies, as it acknowledges the division into two sexes/genders only, men and women. This of course excludes groups that do not identify with the predominant heteronormative discourse. Nevertheless, differences between men's and women's living conditions, based solely on the fact that they are either men or women, legitimates an interest in the issue of gender equality.

In Sweden, an act on equality between women and men was passed in 1979 (Swedish Code of Statutes, 1991), at which point an Equal Opportunities Ombudsman (*Jämställdhetsombudsman/Jämo*) was appointed. The act prohibited sex discrimination in the labour market and required all employers, whether in the public or private sector, to actively promote equal opportunities in the workplace. All employers with ten or more staff were required to draw up an equal opportunities plan and a plan for equal pay.

On 1 January 2009, the Equal Opportunities Act and ombudsman were replaced by the Discrimination Act, accompanied by an Equality Ombudsman (*Diskrimineringsombudsman/DO*) responsible for overseeing compliance to the act (Swedish Code of Statutes, 2008). This could be viewed as a form of gender mainstreaming (a concept that will be discussed in greater depth in the theoretical framework). Today only employers with 25 or more staff are required to have an equal opportunities plan.

The first parental leave act was passed in Sweden in 1974, and the first act on sex discrimination at work became law in 1979. In 2006, the Swedish parliament

united to launch a “National Plan for Gender Equality”, with the main objective that “Women and men should have equal power to shape society and their lives” (SOU 2005:06/155). To a great extent, Swedish society is built on the discourses of gender equality. Social security systems usually assume that each adult is responsible for his/her own support through work. There is no spousal alimony at divorce, and individual taxation was introduced in 1971 (Oláh & Bernhardt, 2008). This strong consensus on gender equality has resulted in Sweden being considered as practising “state feminism” (Bergqvist, 1999; Fehr, Rosenbeck, & Jónasdóttir, 1998). The official level of consensus is total, with all parliamentary parties agreeing on the policy for increased gender equality (SOU 2005:06/155). However, a gender-equal policy is no guarantee of a gender-equal outcome. Even though the country has strong societal norms supporting gender equality and ranks high in several league tables of gender equality (Permanyer, 2008; Plantega, Remery, Figueiredo, & Smith, 2009; United Nations, 2007), Swedish society remains strongly gender segregated. Swedish men work mainly in the private sector, while Swedish women work to a large extent in the public sector. Men, as a group, have access to all kinds of positions, while there are still very few women in higher positions (Statistics Sweden, 2008).

Aims

The overall aim of this thesis is to contribute to a better understanding of the complex links between gender equality and health for men and women. This thesis emphasise the need for a critical approach to the selection of measures when conducting research on complex human relations and human behaviour.

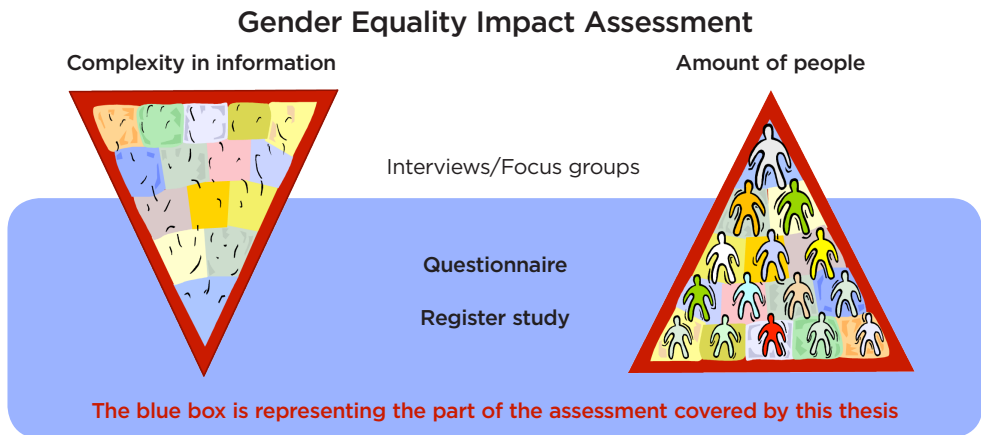
Specific aims

- To create a register-based gender gap index that is able to rank companies by their level of gender equality (Paper I).
- To analyse associations between gender equality at work and health. Both gender equality and health are measured using various measurements (Paper II and Paper III).
- To analyse associations between gender equality in couple relationships and self-rated health using two measurements of gender equality: self-reported and self-perceived gender equality (Paper IV).
- To assess how different measurements of gender equality influence the outcome of health for men and women (Paper II, Paper III and Paper IV).

Thesis overview

Assessing the overall impact of gender equality on health for both men and women requires more than one research method – it requires both quantitative and qualitative methods. In this thesis, only quantitative methods have been used. Figure 1 illustrates what the broad picture could look like, and where this thesis would fit in, if an overall perspective had been used. The more inclusive model is here termed “Gender Equality Impact Assessment”. This is a concept already used by others (Bacchi, 2004; March, Smyth, & Mukhopadhyay, (1999) 2008). The quantitative methods establish the basis which is constituted by the new index, the Organizational Gender Gap Index or OGGI. It is economically viable, easily conducted, and thereby facilitates large-scale comparisons. The index uses the same methods year after year and facilitates evaluation of changes over time. On the next level, a questionnaire is used, broadening our understanding by asking questions about both the work environment and the family situation. Finally, the top level, outside this doctoral project, could represent those questions that have to be asked individually to better understand new discourses, new political landscapes, and new normative systems. The right triangle represents the number of respondents and the left triangle the amount of information that each respondent can contribute with on each level.

Figure 1. Thesis overview



The thesis develops four different measures of gender equality: the organizational gender gap index (OGGI), self-perceived gender equality at work, self-reported gender equality in the couple relationship, and self-perceived gender equality in the couple relationship. The thesis uses three well-known measurements of health: register data on sickness benefit, self-reported sick leave from work, and self-rated

health. The associations between health and gender equality is measured by six different calculations. The calculations and results are presented in the results section.

Conceptual framework

The origin and nature of knowledge is central to all postgraduate research education. Doctoral students have to locate themselves in a tradition of knowledge production where the logics and theories used in the research are based. In interdisciplinary research this could be quite demanding. As both public health science and gender studies are interdisciplinary in nature, it has been a challenge to sort out which knowledge discourses that have the most influence on this thesis.

Multicultural science

In his Rede lecture on the “Two Cultures and the Scientific Revolution”, C.P. Snow talked about the suspicion and incomprehension he found between “the Literary intellectuals” and “the Natural scientist”. He concluded that in our society both the scientific world and the educational system is divided into two cultures – the arts or humanities and the natural sciences (Snow, 2007 (1959)). Even though more than 50 years have passed since Snow’s lecture, much of the division remains in the scientific world (Nelson, 2007). When describing positivism Comte kept the abstract and empirical sciences apart, with the more empirical sciences always leaning on the more theoretical. Medicine is still strongly influenced by positivism, though a positivism which has developed into a modern form in which logistic philosophy is important. This can be traced back to the ancient Greeks – logistic positivism and later positivism with hypothesis testing – and the basic concept still influences the scientific world (Chalmers, 1999). Logical positivism asserts that the only authentic knowledge is that which is based on sense, experience and positive verification. The use of hypotheses and rejection of the null hypothesis is still common in medical science (Dawson & Trapp, 2001).

Today, the use of quantitative methods is supposed to be accompanied by a discussion on applicability, reliability and validity. Quantitative methods have been applied successfully, and conducting research in a way that makes it possible to test the hypothesis again, when new knowledge is presented, has been of indisputable benefit in the medical advances of the past century. Research in the field of public health is, as already noted, interdisciplinary, which means that various methods are applied. Which method is used can of course depend on the background of the researcher, for example epidemiologist, sociologist, medical doctor, or physiotherapist. But it can also depend on the research question. Today it is a common view that different questions need different methods. Different methods answer different questions, and multifactorial questions will need a multi-competent research group to examine them in a profound way (Johnson

& Onwuegbuzie, 2004). In the humanities and social sciences, human conditions are studied using methods that are primarily descriptive, analytical, or critical and differ from many of the empirical methods used in the natural sciences. The hermeneutic traditions are strong and well documented, and the underlying concept is that the researcher is always part of the process and influences the coming processes via the “hermeneutic circle” (Alvesson & Sköldberg, 1994). The basic idea is that data are always interpreted, i.e. they are always constructed against a background of the personal, cultural, ideological and linguistic reference frames that we carry with us. Reflection means that the researcher takes one step back and criticizes his/her analysis (Alvesson & Sköldberg, 1994). The qualitative researcher often criticizes positivists for the assumed objectivity of the researcher (Kuhn, 1962). In the qualitative approach, there is no such thing as an objective researcher. For researchers engaged in the questions of inequity this is often obvious, thus also for feminist researchers. When taking an interest in the field of inequity, it is often also obvious that the researcher is standing somewhere when locating his/her subjects of interest.

Gender inequalities in health have been an area of interest to the field of public health since at least the early 1990s. The different biological constitutions of women and men are likely to contribute to health differences between the sexes. Yet if society did not affect humans at all, whether culturally, socially, economically or otherwise, the similarity between men and women would probably be striking. The search for an explanation for the differences in male and female morbidity and mortality has expanded along with an interest in the relationship between variations within the two groups’ social circumstances and health, i.e. intersectionality. Different ontological perspectives contribute to the development of somewhat contradictory methods for research. Men have long represented the norm for medical research, with women treated as deviations from this norm (Lykke, 2010). The first real questioning of the supposed neutrality of medical research was in the middle of 1980s. Feminist researchers showed that medical science – through its selection of topic, design, study questions, methods, analysis and theoretical perspectives – had up to that point been sex blind and had acted with man as the norm. Requirements for more research on women grew, and interest in research on biological differences between men and women increased. This growing interest in differences was also criticized for overemphasizing the differences even when there was no scientific support for biological causality. However, many gender researchers stressed the need to also focus on the structural differences seen in healthcare systems and on the gender disparity seen in differences in power, hierarchies and access to healthcare (Vetenskapsrådet, 2004).

Three theories important for this thesis

Three theories form the theoretical basis of this thesis. The first – *the theory of justice to gender* – lays the ground for the project’s justification and explains why it is worthwhile. The second – *the theory of eco-social health* – illuminates how different social positions can influence embodied biological health. The third theory – *the theory of convergence* – explains how increased balance in “the power to shape society and one’s life” could lead to balance in health outcomes. The Western philosopher Susan Moller-Okin, born in New Zealand and later a professor at Stanford University, has criticized the modern theory of justice for its male perspective. If a *theory of justice* is to be complete, it must include women and must address gender inequalities, Moller-Okin argues. In her book *Justice, Gender, and the Family* she describes how the entire classic production of justice theory has left out women and placed men as the norm when discussing equity for all (Moller-Okin, 1989). Outlining her case, she discusses two separate occasions where women’s rights as a group are neglected in favour of other groups. Both those examples are relevant to this thesis.

The first is the possible conflict when it comes to the rights of ethnic/cultural groups to form their identity in a marginalized position, when and if this identity building includes traditions in which women are not liberated to the same level as women from the majority culture. In feminist theory, intersectionality, i.e. taking into consideration not only gender but also class, ethnicity, race and sexuality, sees distinctive social hierarchies that mutually construct one another. However, Moller-Okin questions the willingness to handle this conflict of interest in many cultural settings where the understanding of men’s superiority is easily recognized by other men and therefore ethnicity often in a forceful position compared to gender issues (Moller-Okin, 1999). When an ethnic/cultural group, or any other marginalized group, and their traditions and their right to cultural independence is threatened, women are supposed to be loyal to their group. This loyalty to the group overrules their own rights to justice according to Moller-Okin. Further, when it comes to the family the women are expected to be loyal to the children (and the family project) rather than claiming female rights. In the Swedish context, too, being “a good mother” is a far greater commitment than being “a good father” (Elvin-Nowak, 1999; Tornbjør, 2002). Moller-Okin puts forward three principles that necessitate a re-evaluation of justice concerning gender equality in relationships and families. These are 1) justice for all must cover the whole population, i.e. both men and women, not only half of it; 2) justice means that everybody should have the same opportunities in life, regardless of sex; and 3) in democratic societies the family is probably the best environment for young members of the society to learn democratic and just principles (Moller-Okin, 1989). But the family is also the linchpin of gender, reproducing

it from one generation to the next, and Moller-Okin argues for equally shared parenting.

The theoretical perspective of eco-social health discussed by Nancy Krieger is a theory on how human bodies and societies relate when creating ill health. This theory emphasizes that people's perceptions and experiences will be manifested in their biological bodies – embodiment. Krieger has described four core constructs of eco-social theory. The first is *embodiment*, which means how we incorporate, biologically, the material and social world we live in. This implies that anything that has ever happened to us, whether we are conscious of it or not, will affect us and thereby also our bodies for the rest of our lives. The second core construct is *pathways of embodiment*; these are structured simultaneously by societal arrangements of power and so on but also by biological constraints and possibilities and are shaped by evolutionary history. The third core construct is *cumulative interplay between exposure susceptibility and resistance*. This means that the interplay is conceptualized at multiple levels (individual, neighbourhood, national ect.) and in multiple domains (home, work, school, and other public settings) and is manifested in processes across multiple scales of time and space. The final core construct is *accountability and agency*. This is expressed in pathways of and knowledge about embodiment in all relations, and then also as accountability and agency for scientists and for the theories used and ignored to explain inequalities in health. Krieger concludes that “*bodies tell stories about – and cannot be studied divorced from – the condition of our existence; bodies tell stories that often – but not always – match people's stated accounts and that bodies tell stories that people cannot or will not tell, either because they are unable, forbidden, or choose not to tell*” (Krieger, 2004).

Paying greater attention to the impact of gender equality on health does not mean dismissing genes, treatments, healthcare systems and lifestyle as unimportant – it is rather a question of also giving attention to the impact of social determinants on health. In public health, when we focus on inequity in the social determinants, it is also common to suggest actions to change the current state.

In general, the definition and measurement of equity can follow two different and likely complementary routes. One is a more formal measurement of selected key aspects (e.g. income, position) from an external perspective. A typical research question in this tradition is whether differences in resources between the sexes per se affect health (Wilkinson & Pickett, 2009). The other is internal: do people feel situations as equitable and does this perception affect their health? That the availability of resources affects health is self-evident, as shown most clearly in a global perspective. However, beyond a certain level of material resources the relationship may change mechanism. The direct material links between poverty and poor health are replaced by more indirect links between relative poverty and

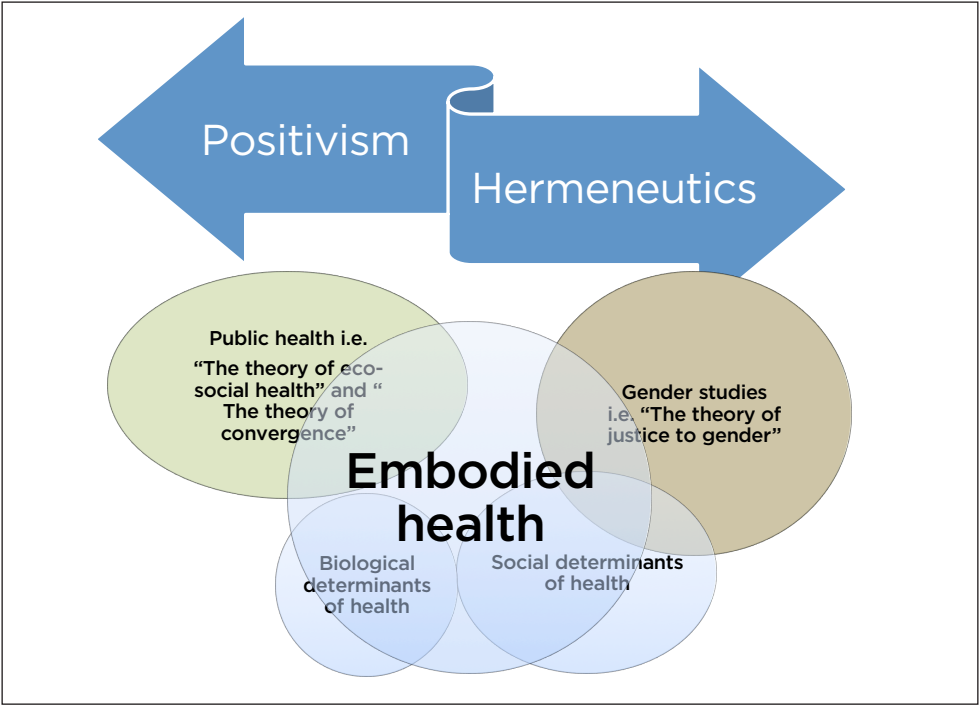
poor health. According to Marmot (Marmot et al., 2008), if people perceive differences in resources and life opportunities as unfair, this may affect their health. This idea has been most explored in the social class perspective, but it can also be relevant in a gender perspective. Nancy Krieger takes this explanation one step further when she outlines how the body is affected by our awareness of the society around us – embodiment (Krieger, 2011). She extends this even further still, stating how our bodies tell stories about our lives that we are not even aware of ourselves.

The third important theory in this thesis is the *theory of convergence*. The theory of convergence is well-known in economics, but it has also been used in public health science, though not always explicitly labelled as such (Annandale & Hunt, 2000; Månsdotter, 2006). The adjusted theory of convergence implies in this case that the differences in health outcomes, mortality and morbidity – which today show different patterns for men and women – would converge with increased gender equality– i.e. men would live longer and women would feel better. The gender differences that we see today have different explanations, sometimes biological and sometimes more lifestyle related. Men's shorter life expectancy is often explained by risk taking, such as excess alcohol consumption, smoking, driving fast, and so on (Holter, 2009; Lohan, 2007). On the other hand, women's greater ill health and higher levels of sickness absence are explained in many different ways. Sometimes they are explained as a way of handling the double burden of paid and unpaid work. Others view it as constituted by the gendered structures of society; however, the biological differences between men and women are also cited as explanations (Eklund, Granitz, & Marklund, 2004; Johansson et al., 2009; Laaksonen, Martikainen, Rahkonen, & Lahelma, 2008).

The adjusted convergence theory implies that if gender equality increases and men and women have greater equality in their possibilities to shape their lives and society, this will also lead to more gender-equal health: men will live longer and women will live healthier lives.

In this thesis gender equality, elusive as it is, is heavily influenced by both positivistic and hermeneutic discourse – using quantitative methods and analysed on the basis of social constructivism, regarding both health and gender as ongoing processes. Gender studies are the historical basis for the application of the theory of justice to gender, which forms the basis for the questioning of the inevitability of mortality and morbidity differences between men and women – see figure 2.

Figure 2 The elusive gender equality – Can impact of gender equality on health be measured?



Public health and other medical fields are constantly developing, and various approaches are used to examine the relationships between knowledge, body and language (Wijma, Smirthwaite & Swahnberg, 2010). Public health and epidemiological sciences are built on various assumptions, including some that stress biological evolution and others that emphasize the social production of disease. The common desire is to explain the current and changing health status of human societies (Krieger, 1994). In figure 2, health should be understood as the embodied outcome of biological determinants shaped by social determinants to a constructed reality and the convergence as the possible future of a more equal society.

Health theory

Health is a word that many of us use every day without giving it much thought. Explaining its meaning is a difficult or most likely impossible task. Health differs in importance and means very different things to different people. Nevertheless, it is necessary to define how it is understood and used in this study.

Health

In everyday language, health often occurs with disease or illness. In the theoretical discussion two main tracks can be found: “Health as the absence of disease” and “Health as a value-based state of wellness”. When we talk about physical health, we are referring to the physical body and a well-functioning body. There are many methods of measuring the functions of the body – oxygen uptake, blood pressure, height, weight and so on. Physical health is often presumed to be objective and easy to evaluate even from the outside. In contrast, psychological or mental health is more difficult to categorize and is more often described subjectively. It is also much more stigmatized.

There have been numerous declarations on health; those discussed below were chosen to show the range without aiming to be comprehensive. In 1948, when the World Health Organization was established, the concept of health was formulated as follows: *“a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”* (WHO, 1948).

The WHO later reconsidered this 1948 declaration, presenting the Ottawa Charter for Health Promotion in 1986, in which health was declared to be *“a resource for everyday life not the objective of living. Health is a positive concept emphasizing social and personal resources as well as physical capacities”* (WHO, 1986). The WHO has continued to work with the complexity of the concept of health and today includes the financing of health systems as a important part of health for all (WHO, 2010).

Concepts that are more biologically understood have also been presented. One of the more influential is the biostatistical theory, or BST, presented by the philosopher Christopher Boorse in 1977. This theoretical concept of health has gained a lot of attention since its presentation (Boorse, 1977). Boorse argued that health is a value-free fact, based on the absence of disease. He bases his arguments on three main assumptions: 1) the reference class, 2) the normal function, and 3) disease as an internal state which impairs health. In Boorse’s biostatistical theory, full health is the normal position, and any divergence from the reference class or normal function is sickness. The need for an empirical and non-normative characterization of health is questioned by Bunzl (Bunzl, 1980). Bunzl also discusses the concept of non-normative goals of the organism, which is part of Boorse’s proposal. In 2007, Kingma also questioned the BST concept. She concluded that the BST is in all relevant ways evaluative and depends on the reference classes as appropriate and therefore never value-free (Kingma, 2007).

One of the more widespread theories in this field is “Salutogenesis” by Antonovsky. Salutogenesis implies that health is an entity of its own and not merely the absence of ill health and sickness. When discussing health, too much

emphasis is placed on other matters than health, such as blood pressure, oxygen uptake etc. Antonovsky argues that health is a position on a continuum and not a dichotomy: “a **Sense of Coherence**” or SOC is what Antonovsky believes determines a person’s health (Antonovsky, 1987).

None of the concepts presented above are more prominent than others in this thesis but they have all influenced my understanding of health.

Public Health

Public health research is an interdisciplinary field focusing on individuals, societies, environments and health systems important for health. As any other discipline, public health research depends on its concepts and theories for generating reliable research. Epidemiology and public health are closely linked, with epidemiology sometimes viewed as the science of public health, which is then considered to be more of a policy area (Krieger, 2011). The theoretical frameworks forming the basis of epidemiology and public health both influence the multi-causal framework often referred to as the “web of causation”, which was established in the field in the late 1960s. However, these frameworks failed to explain why phenomena exist and why they are related (Krieger, 1994). Still epidemiology is about how countless aspects of people’s lives – concerning work, justice, family, children, discrimination and so on – become literally incorporated in our bodies biologically and are manifest in our health status individually and collectively (Krieger, 2011).

Both Marmot and Wilkinson discuss the influence of social status on health, but they view health from different perspectives. Marmot discusses health at the individual level (Marmot, 2004), while Wilkinson discusses it at societal levels. Wilkinson works with gaps, comparing wealthy groups with poorer groups at country level (Wilkinson & Pickett, 2009). Both authors argue that social status and health are linked.

Global level

The Commission on Social Determinants of Health, established by the WHO in 2005 with the aim of increasing health equity, presented its final report in August 2008, entitled *Closing the Gap in a Generation* (Commission on Social Determinants of Health, 2008). The report concludes that the inequitable distribution of power, money and resources must be tackled. Inequity is not only tolerated but also promoted by social norms, policies and practices, and reducing health inequities is for the Commission an ethical imperative. Social injustice is thus killing people on a large scale.

The World Economic Forum contests that “Good health can be expected to lead to better economic growth, through better productivity of those working,

more productive years, better learning capacity, bigger creativity and better abilities to cope with changes. Good health improves the possibilities of a good use of societal resources” (Almunia, Blanke & Drzeniek-Hanuuz, 2010).

It is argued that societies with a more equal distribution of incomes have better health outcomes than those with large gaps between the poorest and the richest (Wilkinson & Pickett, 2009). However, health outcomes vary a great deal within societies, too. For this reason, Wilkinson has argued that relative income has a more powerful influence on health outcomes than absolute income (Wilkinson, 1997).

It is well known that women live longer than men in almost every country in the world. There are some exceptions – countries in Africa with high maternal death rates – where men live longer than women. The quality of available statistics sometimes makes it difficult to assess the mortality and morbidity outcomes at country level.

Equally well known is the fact that when provided with a functioning healthcare system, men and women use the system differently (Annandale & Hunt, 2000). This can be taken as evidence for existing biological differences. However, it can also be regarded as sign of a gendered system that affects both men and women (Connell, 1987; Schofield, 2008). Both Connell and Courtney argue that in the current construction of masculinity there is an increased negative risk for men’s health (Connell & Messerschmidt, 2005; Courtenay, 2000).

National level

The overall goal of Swedish public health policy is to create societal conditions for good health, on equal terms, for the entire population (Ågren, 2002). Today, women and men have different prerequisites for health (Hammarström & Hensing, 2008). Although women are living longer, they have many more days of absence from work (Dutrieux & Viksten, 2004). To achieve the goal of good health on equal terms for the whole population, the national policy instructs public authorities to be guided by 11 objective policy domains. Together they cover the most important determinants of Swedish health. However, in contrast to the international community’s specific focus on the differences between men and women, “the new Swedish policy for public health” treats gender equality as one of the social determinants, alongside age, ethnicity, class and so on (Ågren, 2002). This could be a sign of a deliberate policy concept – gender mainstreaming – in other words always being aware of the implications of gender in all policy work (ILO, 2011). But it could also be a sign of a neglect of gender issues (Bacchi & Eveline, 2010). This criticism of gender mainstreaming is discussed further below in the thesis.

Measurements of sickness absence and health

Sweden, as other countries, has a number of recognized concepts describing sickness absence from work and the allowance provided for such absence. It is very important to reflect on what measurement is best suited for the purpose. Absence from work can occur for various reasons, and short- and long-term absence are affected by different things. In table 2 below, the different measurements used in the Swedish health insurance system are described. Different register holders administrate the various registers.

Table 2 Sick absence in the Swedish health insurance system

Denomination	Content
Sick leave	Sickness absence from work
Sick pay	Sick pay paid by the employer days 2-14
Sickness benefit	Sickness allowance paid by the Swedish Social Insurance from day 15-
Sick-listening	Period on sickness benefit
Sickness period	The total period of absence from work due to illness
Unhealthy rate	The total number of days on sick pay sickness benefit, rehabilitation allowance etc. divided with the population

Differences between men and women in Sweden regarding patterns of sick leave are of course also of interest. Around the year 2000, sick leave increased dramatically in Sweden, with the numbers of days on sick leave nearly doubling between 1997 and 2003. Women accounted for nearly two-thirds of the days, and the entire increase was due to longer periods on sick leave (Angelöv et al., 2011). Since 2007 the number of days of sickness absence have been falling, and more for women than for men (Statistics Sweden, 2009). People’s attitudes towards sickness absence are affecting sickness absence patterns, with various research showing that individuals are acting in accordance with the normative (behaviour) views of their social network (Askildsen, Bratberg, & Nilsen, 2000; Brown, 1995; Cohen, 2004; Hesselius, 2007; Johansson, et al., 2009).

In this thesis, two measurements are used to describe sickness absence: a) sickness benefit from day 15 derived from micro data and b) sick leave reported by respondents in question 10 of the survey study (see pages 41 and 47).

The outcome measurement of self-rated health (SHR), commonly used in this kind of research, is also used in this thesis (Artazcoz et al., 2004; Jun, Subramanian, Gortmaker, & Kawachi, 2004; Zheng, 2009). One of the most common methods of measuring self-rated health is a single question asking people to rate their overall health on a scale from excellent to poor. It is argued that this single (global) question provides a good summary of how people perceive their overall

health (Eriksson, Undén & Elofsson, 2001; Fayers & Sprangers, 2002). Global self-rated health assessments are valuable because they are sensitive to health changes, capture broader dimensions of health than traditional diagnostic tools, and are easy to manage. The self-rated health indicator has been found to have good reliability (Benyamini, Leventhal, & Leventhal, 2000; Idler, Hudson & Leventhal, 1999; Lundberg & Manderbacka, 1996; Martikainen et al., 1999). It has also been recommended by the World Health Organization (Manderbacka, Lundberg & Martikainen, 1999). Emmelin et al. found differences between men and women when self-rated health was used to predict mortality (Emmelin et al., 2003). Spiers et al. concluded that the strong association with mortality in men is unlikely to be explained by differences in the nature of men's and women's physical health problems (Spiers, Jagger, Clarke & Arthur, 2006), while Benyamini et al. suggest that women include more sources of information in their judgment of self-rated health (Benyamini et al., 2000).

In Sweden, 75% of the population consider their health to be “good” or “excellent”, and only 5% consider their health to be “very poor”. Overall, self-rated health varies with age and sex, with men tending to declare higher rates for health than women across all age groups (Statistics Sweden, 2010a).

Gender theory

The basic notion of this thesis is that, in all societies today, a gender system exists from which no-one escapes. The development of gender theory can be regarded as a result of a long historical process concerning women's liberation and women's need for increased influence in society. The political movement for women's liberation that started in the middle of the nineteenth century is therefore the foundation of gender theory as it is understood today. From the 1960s to the beginning of 1980s, the academic development of feminist theory was booming, dealing with a great variety of subjects, such as sex differences, power, inequity, liberation, determinism, and women's own experiences. The gender concept was developed to differentiate between the biology of the sexes and society's impact on men's and women's conditions in life (Rubin, 1975). During this period, a strong feminist critique emerged against the scientific traditions. Feminist researchers criticized not only the perceptive and lack of female experience of the researcher, but also the lack of female experience among the researched. Subsequently, the polarization of social constructivism and biological determinism became influential. Construction and deconstruction are important analytical tools and women are no longer regarded as a homogeneous group, rather representatives of a diversity of groups depending on ethnicity, class and culture – intersectionality. This approach, too, was subsequently criticized for

its inability to enforce the reconciliation of scientific analysis and feminist ideology (Eduvards, 1995; Ljung, 2007)

One often-used theoretical model is gender structures or gender systems. The gender system described by Hirdman is a dynamic structure of expectations, performances and processes recreated in a structured order. She introduces two principles: dichotomy and hierarchy. Dichotomy regards men and women as two completely separate and opposite entities; hierarchy ranks men over women and regards men as the norm (Hirdman, 2002). The gender system as described by Hirdman and others has been criticized for being too static. “Doing gender” is another theoretical model, with a more dynamic approach. In this model, gender is understood as a verb, “doing gender” (West & Zimmerman, 1987), and as a normative system forcing individuals (both men and women) to comply with particular societal expectations regarding personality and behaviour. Gender theories based on social construction agree that genders are not eternal, invariant and given by nature, rather socially created categories, and that their meaning changes and has changed over time.

The gender inequalities in health have interested sociologists since the early 1970s. On views of gender and the body, two different models are often described (Connell, 1995). One is the biological sex model, where the body is viewed as a machine, and taking care of health is like repairing a machine. The second model is the human being as a social construction, where the body is influenced by social processes and the cultural setting. These two contrasting models are both influential in medicine; however, a third model, which takes into account both the biological body and social and cultural influences, is now increasing in popularity. Biological differences between men and women are no longer taken for granted: there is an interplay between biology and the environment that we must take into account (Connell, 1995; Fausto-Sterling, 1997).

In the book *Gender Inequalities in Health*, Ellen Annandale and Kate Hunt discuss the evaluation of gender awareness in medicine. They categorized the development into a theoretical and a methodological approach. The early theoretical approach was characterized not only by a distinction of gender and sex, and differences between men and women, but also by an exclusion of women and treating men as the norm. The early methodological approach was characterized by statistics, one sex-only samples, and an association between work and health. Annandale and Hunt describe the theoretical framework of today as characterized by the social system known as gender order and by a questioning of the division of sex and gender. Today’s methods are characterized by a greater combination of qualitative and quantitative methods (Annandale & Hunt, 2000).

Gender equality

Gender equality and feminist/gender research have been more or less inseparable since the issues were first put on the agenda in the early 1970s. However, gender equality is only one perspective among many others in gender theory. Criticism of gender equality is severe within the field (Bacchi, 2009; Rönnblom, 2008). Taking a perspective of gender equality means that many prerequisites are already set. This includes the dichotomization of the sexes, meaning that there are two kinds of people, men and women. This gives no or little possibility for diversity within the group of women or group of men. The perspective therefore becomes what is termed heteronormative, placing “gender equality” in a position that can be labelled “doing gender” (West & Zimmerman, 1987). Hence, at the same time as the discourse questions the inequities between men and women, it can be charged with preserving the status quo, i.e. the division. However, gender equality can also be regarded as a concept that on a practical level attempts to alter the consequences of the gendered systems. Gender equality covers a number of factors – from undefined concepts such as equal power and equal rights, to concrete issues such as earning the same salary or wage for the same work.

Gender equality is, for someone who thinks of gender as being done, also something that is constantly produced and reproduced by the meanings we attribute to it.

Gender equality in the relationship

Although increased gender equality between men and women is the prevailing norm in the Swedish society of today, this still means gender equality within the traditional heteronormative unit. Even couples who consider themselves gender equal admit to having unequal practices and traditional roles of femininity and masculinity (Grönlund & Halleröd, 2008).

The “European values study” showed that Swedes, more often than other Europeans, tend to think that both parties in a relationship should contribute to breadwinning (Halman, 2001). Oláh and Bernhardt found in their research that both men and women very much value shared parenting, but more women than men also think that economic equality, equality in the workplace, and a shared division of household work are important (Oláh & Bernhardt, 2008). When asked about their attitudes to gender equality, young Swedish couples are more in favour of egalitarian sharing than Norwegian couples (Bernhardt, Noack, & Lyngstad, 2008). On the other hand, Norwegians are more supportive than Swedes of government interventions to increase gender equality in the boards of large companies (Jacobsson & Kotsdam, 2009).

In Swedish public discourse, there is a strong consensus on the importance of a gender-equal society; nevertheless, a broad variety of research has shown that in families the traditional division of labour remains the norm, and furthermore that the couples involved defend that division as fair. In her book “She, He and Their Home”, (my translation) gender psychologist Eva Magnusson interviewed 30 Scandinavian couples on their views of gender equality. In line with earlier research, she found a wide diversity in “talk about gender equality” and “performance of gender equality”. She notes that words such as “natural” and “realities” are often used by people to justify their attitudes (Magnusson, 2006). Even though Swedish couples are in favour of gender-equal relationships, the change of practices is slow. The Parental Leave Act (The Swedish Code of Statutes, 1995), first introduced in 1974, currently permits parents to stay at home with their newborn children for 480 days whilst receiving parental benefits. This benefit has an upper limit in the Swedish system, this is argued to result in men taking less parental leave than women, as families are financially better off if the lower-salaried parent stays at home. Accordingly, it has been found that 78% of the days available for parental leave are still taken by women (Statistics Sweden, 2010a). The Parental Leave Act also gives provision for “Leave with temporary parental benefit”, which covers 80% of lost income. Like parental leave for newborns, the majority (64%) of days used by parents for temporary leave are taken by women (Statistics Sweden, 2010a). There is currently a political proposal to increase the fathers’ proportion of the parental leave allowance (Vänsterpartiet, 2010). However, there are also political parties who reject the so-called state feminism: they wish to increase the relevance of the family and stress that family decisions should be taken within the family and not by politicians (Kristdemokraterna, 2010).

Today, Swedish women have a higher educational level than Swedish men, though without economic compensation as income differences remain. Around fifty percent of Swedish mothers with children under seven work part time, while it is uncommon for fathers not to work full time (Statistics Sweden, 2010a). The gender revolution is often talked about as a two-stage shift: a first step where women increase their participation in the workforce and education, and the second where men increase their participation in domestic duties (Bernhardt et al., 2008). Increased gender equality in education and participation in the labour market by women has not been balanced by men assuming a greater share of household work (Coltrane, 2000). A survey on recently graduated healthcare professionals in Sweden also showed that women in their 30s did more unpaid housework than their male counterparts of the same age (Enberg, Stenlund, Sundelin & Öhman, 2007). A study from 2005 evaluating differences in a couple’s market productivity used a theoretical model that assumes that rational economic behaviour explains the division of paid and unpaid work in a family; however,

this could not be shown (Halleröd, 2005). There is a growing literature on the allocation of domestic labour and very few seem to doubt that women do the greater part of unpaid household work. Knowledge is still limited on the reasons why women do more than their share, and how the division of household work influences the couple's relationship and their growing children. Ahrne and Roman investigated the work-family balance in Sweden using the concept of more or less egalitarian couples (SOU 1997:139). Using a questionnaire, they based their egalitarian concept on three variables: cooking, laundry and cleaning. The authors found that couples without children are the most gender equal, but when the first child is born they tend to organize the domestic work unequally (SOU 1997:139).

Over the last 25 years, women in Sweden have participated in the labour market almost to the same extent as men (Statistics Sweden, 2010b). Despite this high participation, Swedish women have relatively high fertility levels of almost two children per woman. This might be a consequence of long-implemented gender-equality policies (Bernhardt & Goldscheider, 2006). The so-called "second demographic transition", which has long been a feature of Western societies, is characterized by individualism, delayed family formation, and gender equality in education and the labour market (Surkyn & Lesthaeghe, 2004). This transition has reduced the fertility rate significantly, constituting a major challenge for many countries (Kohler, Billari & Ortega, 2002). Gender equality and family policy are often considered the reasons why Sweden and the other Nordic countries have relatively high fertility rates, while rates are declining in many other European countries (Oláh & Bernhardt, 2008). Parenthood has been postponed, however. Bernhardt and Goldscheider argue that in contemporary Sweden it is gender-equal men, not women, who wish to postpone their entrance into parenthood (Bernhardt & Goldscheider, 2006).

Gender equality at work

Around 85% of both men and women work in Sweden (88% of men and 81% of women) (Statistics Sweden, 2010a). High employment levels do not automatically lead to an integrated labour market, however. International comparisons show that high female employment in a country often also mean high segregation between men and women, measured by a segregation index (Emerek, 2005). Segregation can be expressed not only as men and women working in different sectors, but also in terms of what they do at work – this can be seen both at sector level and within companies. The presence of gender-unequal companies is likely to have consequences in several spheres of life: profits, incomes, economic growth, health, working environments and peoples' sense of fairness.

Swedish men work in the private sector to a larger extent than women (81% to 48%), whilst Swedish women work to a larger extent in the public sector (50%

versus 18%) (Statistics Sweden, 2010a). Income differences remain, with Swedish women earning 79-98% of men's incomes, depending on whether calculations are standardized or not (Statistics Sweden, 2010a).

The injustice that results from the division of labour between women and men affects virtually all women, men and children in society, though not all in the same way. Working life is important in reinforcing the gender system (Abrahamsson, 2002; Enberg et al., 2007). Research shows that the development of organizations is obstructed by gender order, which has a tendency to restore itself even after deliberate organizational changes have been made to influence gender structures (Abrahamsson, 2003; Gherardi & Poggio, 2001; Murgia & Poggio, 2009). Haas and Hwang conducted a mail survey to study the support of large Swedish companies for men's participation in child care (Haas & Hwang, 2007). Using their own survey index, they found that companies have only just begun to implement Swedish gender policies.

Sweden has had an *Act on Equality between Women and Men* since 1979. This act prohibits sex discrimination in the labour market and requires that all employers, whether public or private sector, actively promote equal opportunities for men and women at work. All employers with more than ten employees (since 2008-09 more than 25 employees) are required to prepare an annual equal opportunities plan and a plan for equal pay.

Gender mainstreaming

Gender mainstreaming is a public policy concept. Since the fourth World Conference on Women in Beijing in 1995, it has been in common use by United Nations organizations, the International Labour Organization, ILO and the World Economic Forum. In July 1997, the United Nations Economic and Social Council (ECOSOC) defined the concept of gender mainstreaming as follows:

“Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels. It is a strategy for making the concerns and experiences of women as well as of men an integral part of design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres, so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal of gender mainstreaming is to achieve gender equality. (www.un.org/womenwatch/directory/gender_mainstreaming_10314.htm).

The mainstreaming idea is to incorporate the gender perspective into the mainstream of policy documents and decisions. References to gender should be found in all policy documents. Several critics have pointed out the drawbacks of the concept: when large organizations are acting systematically upon a policy issue – gender – they will shape the meaning of the concept (Rönnblom, 2008). This can be used both to promote and to resist increased gender equality (Lombardo, 2005). Stratigaki claims that other, more efficient strategies have been sidelined after the introduction of gender mainstreaming, and this has been confirmed by other research (Stratigaki, 2005).

Measurements of gender equality

One of the reasons why it is difficult to do research on gender equality is that there is no generally agreed upon definition of gender equality and no generally agreed way of measuring it (Walby & Armstrong, 2010). In Sweden most people are positive towards increased gender equality, but what they are actually positive to is not so obvious. People seldom define the concept in their daily talk. A common answer to the question “What is gender equality?” is “equal pay for equal work” or “sharing household duties equally”. Many Swedish people seem to consider that they are gender equal. Despite its importance, a precise and generally agreed upon definition of gender equality is difficult to identify. Some researchers use the explicit term “gender equality” (Eriksson & Nermo, 2010; Magnusson, 2006), while others use concepts such as fairness or equity (Baxter, 1997; Nordenmark & Nyman, 2003). In this thesis, I have used a political policy as the normative position on gender equality.

There are several ways of measuring gender equality, **each with its own advantages and disadvantages**: some capture power relations very well, others measure gender differences at national level (Plantega et al., 2009; Schofield & Goodwin, 2005). There are already many different indexes that describe gender equality based on statistical data. Internationally known are for example the Gender-Related Development Index (GRDI), the Gender Empowerment Measure (GEM), Women’s Empowerment and the Gender Inequality Index (GII), which is related to the Human Development Index (HDI) (Philips, 2008).

The World Economic Forum’s Global Gender Gap Index (GGI) was released in October 2010; *The Economist’s* Women’s Economic Opportunity Index was launched earlier the same year with a focus on legislation. All the above-mentioned indexes compare countries, though with different focuses. An Australian index, Gender Equity in Public Institutions, compares public institutions with considerable emphasis on studies of relations and processes in workplaces (Connell, 2005). In Sweden, there is an index comparing municipalities (EqualX), an index comparing female representation on boards of companies listed on the stock

market, and a number of commercial indexes used within companies (Statistics Sweden, Nutek, & Region Västra Götaland, 2006). However, to the best of my knowledge there is no index comparing gender equality at organizational level using register data linked to gender equality in the couple relationships.

The life spheres included in the indexes are, with some variations (mainly in terminology), health, education, economic resources and political power. They are all normative in the sense that they claim that one specified state of the world should be ranked over another, i.e. that a state of equal wages for women and men is preferable to unequal wages. The construction of these normative indexes appears to be somewhat arbitrary, though. Some aspects of “gender equality” phenomena that are possible to measure are measured and some aggregation rules are used.

Materials and methods

Methodological approach and general design

This thesis consists of two studies one register study and one survey study. For both studies, the National objectives for gender equality (shown below) was chosen as the point of departure for the definition of gender equality. This policy represents social objectives adopted by decision-makers, who occupy their positions as a result of a socially approved political process (Chong & Benli, 2009). Thus, I believe that a definition based on official policy meets with “widespread acceptability”, at least at a normative level. The register study resulted in an index used to measure gender equality at organizational level; the aim of the survey study was to evaluate gender equality at individual level and its associations with health.

Figure 3 National objectives for gender equality in Sweden.

The main objective of the government's policy is that “women and men shall have equal power to shape society and their own lives”. A prerequisite to accomplishing this is that women and men enjoy the same opportunities, rights and obligations in all spheres of life.

Interim objectives:

An equal distribution of power and influence. Women and men shall have the same rights and opportunities to be active citizens and to shape the conditions of decision-making.

Economic equality between women and men. Women and men shall have the same opportunities and conditions regarding education and paid work that provide life-long economic independence.

An equal distribution of unpaid care and household work. Women and men shall take the same responsibility for household work and shall have the same opportunities to give and receive care on equal terms.

Men's violence against women shall come to an end. Women and men, girls and boys, shall have equal rights and opportunities to physical integrity.

The Swedish Parliament 2006

The cross-sectional register study

Study design

The register study takes its starting point from the interim objectives of the National Objectives for Gender Equality described above. The key words chosen were:

1. Equal power and influence
2. Economic equality
3. Equal distribution of unpaid care and household work
4. Men's violence against women shall end

The idea was to concretize these key words with information that could be easily sourced from statistical registers or was available in organizations/companies. This would make the first step relatively easy for anybody who was interested in differences in gender equality at organizational level in companies in Sweden or elsewhere.

Contact was made with Statistics Sweden, also known as SCB, to determine whether this project was feasible. Statistics Sweden concluded that what we wished to investigate through our key words could quite easily be found in Swedish registers, with one exception – men's violence against women. There are of course also statistics on violence in Swedish registers. However, there are no studies on the frequency of violence in the population as a whole, and the samples are too few in number to be able to be used in this study, where we use individual data merged at organizational level. Our aim of collecting data at company level would make it even more difficult to use the information on violence available today. It was indeed a miscalculation when we had to discard one of the key words that were intended to form the gender equality index. This gave us three key words for statistical investigation.

Data sources

The Swedish micro data are available in registers with demographic, socioeconomic and medical information, giving extraordinary opportunities for cross-sectional research. Parish registration, which started in Sweden in 1686 and was required by church ordinance, laid the groundwork for future population statistics. Since 1749, Sweden has collected statistical information on the population nationwide. Statistics Sweden is a central government authority for official statistics and other government statistics.

The main source for our information is *LISA*, the *Longitudinal Integration database for social insurances and labour market studies*. This database inte-

grates current data from the labour market, educational and social sectors and is updated every spring. The prime objective in LISA is the individual; however, there are also connections to the family and work. This database provides the basis for longitudinal statistics and research, about whole or parts of groups or geographical areas, about connections between paid work and alternative occupations such as study or paternal leave, and between paid work and ill health.

LISA is stored as an SQL database. If necessary, the information can be linked with information from other databases.

We also obtained data from *Register-based labour statistics, Wage Statistics Descriptions, RAMS* which provides yearly information on human resources, industrial structures and flows in the labour market.

From the *LISA* database we received information on individuals':

- Social registration number (coded)
- Company number (coded)
- Profession
- Sex
- Level of education
- Days on parental leave
- Days on temporal parental leave
- Days on sick leave (from day 15)

From *Wage Statistics Descriptions* we received information on individuals':

- Social registration number (coded)
- Company number (coded)
- Age
- Number of employees employed at the company
- Full-time/part-time work
- Age structure of employees at the company
- Salary/wage
- Form of employment

The data files were delivered as SAS files. The three data files were merged together in the SPSS program. The data used in this study are from 2004.

Measuring gender equality

From the LISA database we obtained 1 113 255 individuals and from Wage Statistics 1 097 202 individuals. For most individuals, it is possible to gain a total picture thanks to the unique individual identification number in the two databases. Although in this part of the research the individuals are not interesting per se, it is still necessary to be able to follow each individual when building the information at organizational level. To increase transparency, it was decided to select two sectors representing opposite socioeconomic groups. The chosen sectors were the Computer sector and the Grocery production sector. As already noted, the Swedish labour market is strongly segregated: less than 20% of employees in the private sector are female. In order to enable the intended comparisons, not only between men and women but also between companies within the sectors, we chose private sector groups where we knew many women were employed despite this segregation. The Computer sector was labelled a white-collar sector and the Grocery production sector a blue-collar sector. After reducing the number of companies by excluding all companies with fewer than 10 employees and all companies employing only one sex, the Computer sector consisted of 11 471 persons in 46 companies and the Grocery production sector of 32 151 persons working in 77 companies. Earlier research has shown differences between white and blue-collar sectors regarding views on working environment, employment and earnings, and differences in sickness absence and health (Hu, Kaplan, & Dalal, 2009; Krantz, Berntsson, & Lundberg, 2005; Lund, Kivimäki, & Christensen, 2009; Schwerdt, Ichino, Ruf, Winter-Ebmer, & Zweimuller, 2010; Väänänen, et al., 2008)

Construction of the index

Finally, six variables were used for the index. Our aim was to keep the index as short and easy to define as possible.

Table 3 Transposition of “The National objectives for gender equality” via key words to variables present in the national registers

Keywords	Variable	Register
Equal power and influence	Number of employees	Wage statistics
	Education	LISA
Economic equality	Income	Wage statistics
	Full time /part time	Wage statistics
Equal distribution of unpaid care and household work	Parental leave	LISA
	Temporary parental leave	LISA

The number of employees gives information on how many men and women are employed at each company and provide the base for the rest of the calculations.

Education is one of the most frequently used variables to explain present gaps in earnings and positions between men and women in companies. However, in Sweden today more women complete higher education than men (Statistics Sweden, 2010b). Nevertheless, this variable is essential in an index measuring gender gaps in companies or organizations. Differences in education can of course indicate that women and men are working with different tasks and have different salaries.

The next variable is income, a self-evident element of this index. Differences in income can be due to different positions or performance, but also to gender inequalities: a large gap here would suggest that managers would have to examine this more closely (Manning & Saidi, 2010).

In Sweden 26% of the female workforce work part time, compared to 8% of the male workforce (SCB, 2007). This has implications not only financially and for career opportunities at work, but also of course for the possibilities to spend time with one's children.

Parental leave and temporary parental leave have already been investigated and showed predicted values for sick leave, mortality and gender equality in the family (Bekker, Croon & Bressers, 2005; Eriksson & Nermo 2010; Månsdotter, Lindholm, Lundberg, Winkvist & Ohman, 2006).

Analyses

Ranking companies by gender equality (Paper I)

Means for companies, by sex, were calculated for each variable. The ratio for each variable was calculated irrespective of whether the variable favoured one sex or the other, and the larger number was always made the numerator. Some ratios were very high: one extreme example is parental leave, with a ratio of 42 in one company. To avoid giving one variable unreasonable weighting, we set 3 as the maximum, i.e. twice the ratio limit of 1.5 for equality. Therefore, the sum for each variable can range from 1 to 3. The variables were added using equal weight and divided by 6. This gave a continuous scale from 1, full gender equality, to 3, least gender equality.

Table 4 Construction of the OGGI index

Component	Female	Male	=Quota
No. of employees	N1	N2	$N1/N2$ or $N2/N1=Q^1$
Education	Years mean= X^1	Years mean= X^2	X^1/X^2 or $X^2/X^1=Q^2$
Income	SEK mean= X^1	SEK mean= X^2	X^1/X^2 or $X^2/X^1=Q^3$
Part time/full time	Hours mean= X^1	Hours mean= X^2	X^1/X^2 or $X^2/X^1=Q^4$
Parental leave	Days mean= X^1	Days mean= X^2	X^1/X^2 or $X^2/X^1=Q^5$
Temporary parental leave	Days mean= X^1	Days mean X^2	X^1/X^2 or $X^2/X^1=Q^6$
Sum	$(Q^1+Q^2+Q^3+Q^4+Q^5+Q^6)/6$		OGGI-Index

The level of gender equality for each indicator can be measured as a quotient: men's income divided by women's income or vice versa. If the income is the same, the quotient will be one; if not, we will obtain a continuous variable. Each quotient is meaningful individually but can also be summed in an index.

We also calculated a dichotomous version of the index. The reason for creating a second index was firstly to be able to compare the two versions. The dichotomous version was based on the well-known 40/60 rule, often implemented for gender equality, not least in politics. That is, if one sex has at least 40% of the seats in parliament, for instance, this is considered a reasonable degree of gender equality. This means that ratios between 1 and 1.5 are considered to be equal – yielding a score of one point – while ratios between 1.51 and 3 are considered to be unequal and receive no points. The most gender equal can thus receive six points, while the least equal receive zero points.

The continuous index picks up even small differences in gender equality. This was the main reason why we chose the continuous index as our Organizational Gender Gap Index, OGGI.

Background variables such as social registration number (issued at birth), age, marital status, company number, and position in the company were also collected for each individual in the OGGI database.

Sickness benefit absence and association with OGGI (Paper II)

In the register data, information on individuals' sickness absence from work was available as a sickness benefit record see table 2. We dichotomized the information into whether or not the individual had received sickness benefit during the year; we then calculated the mean for the company.

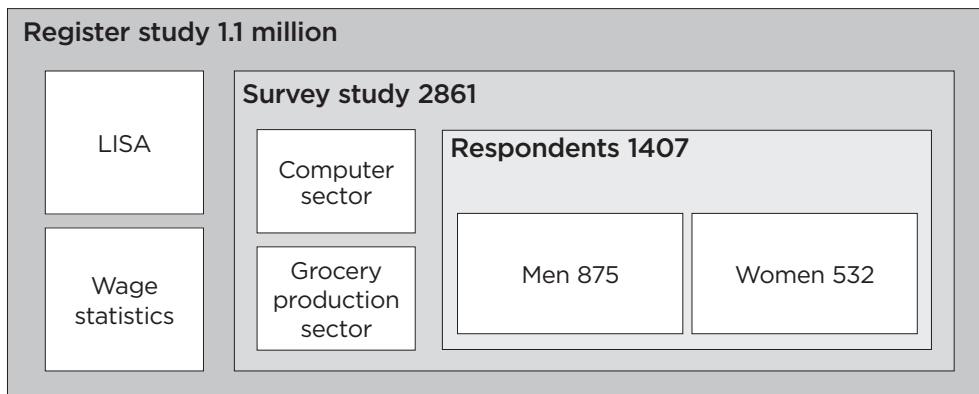
In paper 2, logistic regression analyses were conducted to assess associations between the register-based organizational gender equality index (OGGI) and absence on sickness benefit. The analyses were also adjusted for age, education, income, full-time/part-time employment and business sector. All the data analyses were conducted using PASW Statistics 18 (formerly SPSS statistics).

The cross-sectional survey study

Study design

The study was conducted by postal survey, sent to the home address of employees, with two reminders. Companies were selected from the gender equality ranking of the OGGI index in the register study. Twenty-one companies, the most equal and the least equal companies from the ranking of each sector, formed the study population. Statistics Sweden had the code key which linked the information on the companies selected from the register study and the employees in those companies.

Figure 4 Study participant selection process



Sample

All employees from the selected companies were invited to participate, in total 2861 persons, see figure 4.

The companies belonged to two different sectors: a blue-collar sector, the Grocery production sector, and a white-collar sector, the Computer sector.

Frame Imperfections

Both over- and undercoverage were likely, since the target population consisted of employees in the selected companies in 2008 and the sampling frame consisted of employees in the same companies in 2004. The overcoverage was checked and found to be five persons ($2866 - 5 = 2861$).

Response rate

In total 1407 persons completed the questionnaire, giving a response rate of 49.2%. For women the response rate was 54.5% and for men 46.4%.

Non-response

The main parts of the non-response were questionnaires not sent back— in this survey 50.8%. Sweden has traditionally had high response rates for postal surveys, even if rates are falling. The topic and trust in the agent are factors influencing the response rate (Brage & Bergman, 2004).

Partial loss (partial non-response), that is, one or more questions not answered (1454 cases), was between 0.2% and 7.8% in this study, depending on the question. The question with the highest non-response rate (7.8%) was the question on musculoskeletal problems (no. 73).

In order to minimize measurement errors, Statistics Sweden's technical laboratory examined the questionnaire and made regular checks of the allowed values at registration. They also examined the non-respondents, as these were available in the registers. They concluded that non-respondents tended to be men, be younger, have a lower level of education, have lower income, live in bigger cities, and more often to be born outside Sweden. Still no calibration of weights was given.

Questionnaire

The questionnaires were registered by scanning and a data file was produced. The work in this thesis forms part of a larger project and the questionnaire contains 95 questions totally. In this doctoral project we used 30 of the 95 questions.

The questions were chosen to give the best possible answers to the research questions. In a pilot study, 300 individuals answered the questions in autumn 2007. The pilot study guided us in revising the questionnaire. The revised questions were then reviewed again by experienced experts at Statistics Sweden and the final version of the questionnaire was completed (Appendix 1, in Swedish). The survey was conducted in collaboration with Statistics Sweden.

Two male and four female respondents reported living with a partner of the same sex. We did not make any special calculations for this group. They are included in the total study population.

The mail survey also included questions on background variables such as age, sex, nationality, education, profession, employer and working hours. A number of questions covered health, including both days on sick leave and two different measurements on self-rated health, EQ 5D and single-question self-rated health (SRH). Self-perceived gender equality is a new question developed by the research group to resemble SRH. Parts of the questionnaire are used in other research projects.

Self-rated health, question 72

Self-rated health is a subjective summary of how individuals rate their own health. It can be measured using one or several questions in which a person makes a judgment about her or his own health. The single-question scale ranges from very good to very poor in five steps. Self-rated health is compared to the level of gender equality both in the relationship and at work.

Self-reported sickness absence, question 10

This question evaluates sickness absence over the past year. Respondents first answered whether they had been sick at all and then gave the number of days in five bands: 1–7 days, 8–14 days, 15–30 days, 31–90 days, and more than 90 days.

Self-perceived gender equality, question 12

The aim here was to investigate whether a single question could provide an answer on how gender equal a couple's relationship is. The question evaluated was *How gender equal is your relationship with your partner?* Self-rated health has been shown to be a good predictor of mortality and morbidity; we wanted to know whether it is possible to evaluate gender equality in the same effective way. If this single question on gender equality gave the same answers as a battery of questions on responsibilities, time sharing, economic power and so on, then it could continuously be used. The subsequent question was whether self-perceived gender equality gives a reliable answer regarding the levels of gender equality in both the private and public spheres?

How gender equal is your relationship with your partner?

- 1 ☐ Totally equal
- 2 ☐ Quite equal
- 3 ☐ Not very equal
- 4 ☐ Not at all equal

(Translated from Swedish)

This question was number 12 in the questionnaire, after the questions on education, profession, full or part-time work and income, but before the questions on sharing of household duties (20 a-k) and division of parental leave and temporary parental leave (21 and 22).

Self-reported gender equality, questions 3-6, 9, 13-19, 20-23

Self-reported gender equality is designed to illustrate the national policy of gender equality (see figure 3), adapted to the private sphere but comparable with the OGGI index.

Self-reported gender equality was constructed by measuring the equality between the respondent and her/his partner in three domains:

- Domain 1: background variables such as income, education, full or part-time employment.
- Domain 2: sharing of time and responsibilities for household work, comprising 11 questions.
- Domain 3: sharing of parental leave and temporary parental leave for child sickness.

When respondents completed the questionnaire, they were asked to provide information on both themselves (questions 3-6, 9) and their partner (questions 13-19) for domain 1. Educational achievement was measured by asking respondents about their and their partner's highest level of education, using three categories: compulsory school (secondary education), high school (further education), and university or college (higher education). Respondents were also asked about their and their partner's net income, with responses recorded in five income categories. Employment level was measured by asking whether respondents and their partner worked full time (90-100%) or part time (less than 90%). We then measured the similarities and differences in education, income, and full or part-time employment between respondents and their partner. Three new dichotomous variables were constructed, describing whether respondents and their partners had equal or differing responses for each variable.

For domain 2, we asked how respondents and their partner shared unpaid household work (questions 20 a-k, 21-23), which in this questionnaire included cleaning, cooking, washing dishes, routine household shopping, laundry, maintenance of the home, looking after the car, dropping off and picking up children at day-care, routine meetings at school and health check-ups, children's leisure activities, caring for aged relatives, and planning of household duties. The response categories were as follows: the respondent did most of the household work, their partner did most of the household work, they shared household work equally, or household work was not relevant in their setting. In the analysis, after excluding cases where household work was not relevant in the setting, we calculated the proportion of total household work that was shared equally. Respondents who shared at least 50% of household work were considered gender equal.

For domain 3, two separate questions were asked regarding who, the respondent or his/her partner, took longer parental leave and temporary parental leave. Their responses were re-coded into three categories: the respondent stayed at home more often, his/her partner stayed at home more often, or they shared their time. We then constructed two new dichotomous variables describing whether each leave was shared equally or not.

Finally, we measured the gaps in the six constructed variables between respondents and their partners, and used the results to generate a self-reported gender equality index. No consideration was taken of the direction of the gap. The measurement of gender equality in the relationship based on the responses to the questionnaire, here called self-reported gender equality, is used as the normative dimension in this study. The survey answers contain the respondent's information on how the couple divide responsibilities and time in their family. From this self-reported information we produced an estimation of gender equality practice in the household, used as a normative comparison to the self-perceived gender equality question. The self-reported normative index to some extent deals with the same variables as the gender equality index created in the register study: income, working hours, educational level, and division of parental leave and temporary parental leave. To this is also added information on the division of time and responsibilities in the household.

Self-perceived gender equality at work, question 24

The third gender equality concept used in the questionnaire was a single question on gender equality at work.

How gender equal is your workplace?

- 1 ☐ Totally equal
- 2 ☐ Quite equal
- 3 ☐ Not very equal
- 4 ☐ Not at all equal

(Translated from Swedish)

Analysis

SRH and the impact of gender equality at work, measured using two different measurements (Paper III)

Two logistic regression analyses were conducted to assess associations between self-rated health and the register-based organizational gender gap index, OGGI, and self-rated health and self-perceived gender equality at work. The analyses

were adjusted for age, education, income, and full-time vs part-time employment. The second analysis using self-reported gender equality at work was also adjusted for the OGGI. All the data analyses were conducted using STATA Version 11.1 (StataCorp 2010).

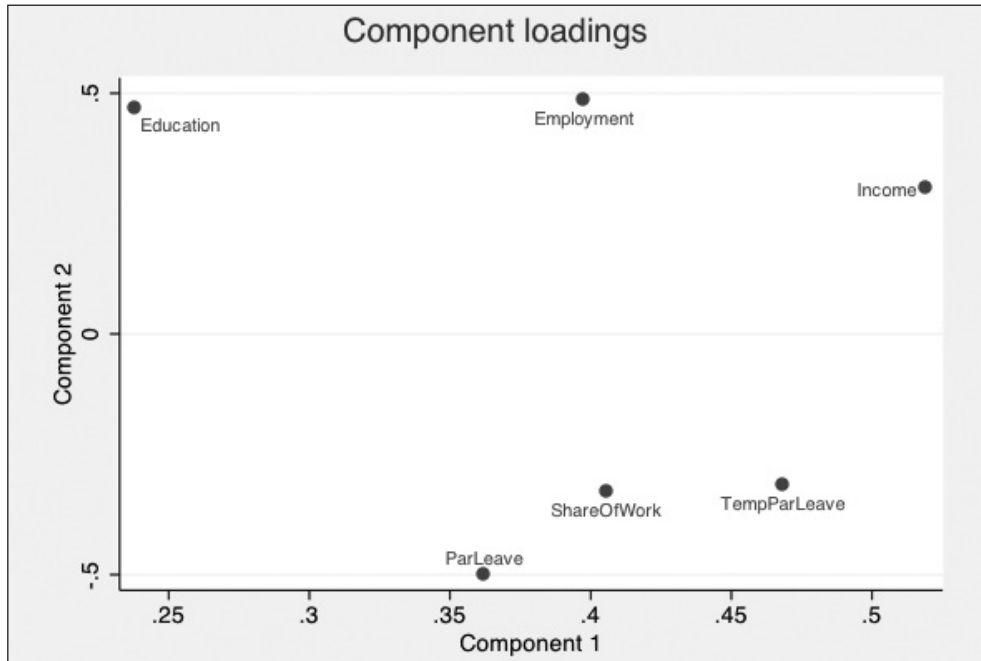
SRH and the impact of gender equality in couple relationships, measured using two different measurements (Paper IV)

A self-reported gender equality index was created using principal component analysis (PCA). PCA has been used extensively in developing a wealth index as a proxy for socioeconomic status (Fabrigar, MacCallum, Wegener & Strahan, 1999; Vyas & Kumaranayake, 2006). In our study, PCA was used to reduce the dimensions of the six intercorrelated self-reported variables into one or more uncorrelated components. We tested the basic assumption of PCA, i.e. independent sampling and linear correlation between variables used in the PCA. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.6, indicating that our sample size was adequate for the PCA. The determinant of the correlation matrix of 0.79 and Bartlett’s test (chi-square=162, df =15, p<0.001) indicated that all six variables included in the analysis were correlated with each other. In the PCA, the two first-selected components captured and explained 46% of the variation in the data. The following table presents the factor loading for each component. The results are then illustrated graphically in the following figure. The factor scores were calculated from these components and the scores then categorized into tertiles, with the lowest tertile representing couples with the least gender equality and the highest tertile representing those with the greatest gender equality. This index is hereafter termed the “self-reported gender equality index”.

Table 5 Items used in self-reported gender equality index and their component loading in the PCA

		Factor Loading	
Domain	Items	Component 1	Component 2
1	Education	0.2381	0.4669
1	Income	0.5196	0.3025
1	Full /part time employment	0.3976	0.4846
2	Share of household work	0.4057	-0.3279
3	Parental leave	0.3623	-0.4999
3	Temporary parental leave	0.4685	-0.3135

Figure 5 Factor loading for the variables constituting the self-reported gender equality index



The agreement between self-perceived and self-reported gender equality was assessed using the weighted kappa statistic and its 95% confidence interval (CI). The weighted kappa statistic was used to accommodate the ordinal nature of the response scale, and quadratic weight was used in the calculation (Sim & Wright, 2005).

With multivariable logistic regression, we assessed the association between gender equality and self-rated health. Separate models were built for self-perceived gender equality and the self-reported gender equality index. Each of these models was controlled for respondents' age, education and income, and we reported the odds ratio and its 95% confidence interval (95% CI).

All the data analyses were conducted in STATA Version 11 (StataCorp 2009).

Ethics

The whole research project and included studies was approved by the Regional Ethics Review Board in Umeå, number 07-124 M.

For the register study, Statistics Sweden's Board of Ethics approved the retrievals from the databases. Data were delivered in aggregated form as statistical retrievals and the individual data were anonymous.

The participants in the survey study are regarded as giving their informed consent when they send in the questionnaire to Statistics Sweden. On delivery the data file was anonymous and the key was kept by Statistics Sweden.

Results

Different measures of gender equality

In this thesis, the “National objectives for gender equality in Sweden”, adopted by the Swedish parliament in 2006 (figure 3), is the normative standpoint for the definition of gender equality. Two indices were created to illustrate this normative standpoint, one at organizational level and one at couple relational level. The indices were tested against the self-perceived gender equality measurement, which represents respondents’ own views of gender equality at work and in their couple relationship.

The different measures of gender equality are presented in table 6.

Table 6 Gender equality measurements used in the thesis

Gender Equality Measurement	Name in the Paper	Used in Paper no.	Measuring Level
Gender Equality Normative Index GENI 1	Organizational gender gap index - OGGI	1, 2 ,3	Level 1 Organization
Gender Equality Self-Perceived 1 GESP 1	Self-perceived gender equality at work	3	Level 1 Organization
Gender Equality Normative Index 2 GENI 2	Self-reported gender equality index	4	Level 2 Couple relationship
Gender Equality Self-Perceived 2 GESP 2	Self-perceived gender equality in the couple relation	4	Level 2 Couple relationship

Results in summary

The results in this thesis relate to three independent conditions: the measurement of gender equality, the measurement of health, and the focus of men or women.

In table 7, the results are summarized and presented as six cases. The cases evaluate the relationship between one measurement of gender equality and one measurement of health. The outcomes are presented separately for men and women, as we have found some interesting differences.

Table 7 Results in summary

Case	Gender Equality Measurement	Health Measurement	Outcome for Men	Outcome for Women
1	GENI 1	Sickness benefit	Increased	Increased
2	GENI 1	Self-rated health	No association	No association
3	GESP 1	Self reported sick leave	Decreased	Decreased
4	GESP 1	Self-rated health	Increased*	Increased
5	GENI 2	Self-rated health	Minor increase*	Increased*
6	GESP 2	Self-rated health	Increased	Increased*

* Non-significant

Results case by case

At Organizational level (Papers II and Paper III)

The study population consisted of 46 companies in the Computer sector and 77 companies in the Grocery production sector. The companies were ranked from 1.43 to 2.09 in the Computer sector and from 1.13 to 2.14 in the Grocery production sector.

Of the 123 companies ranked in the register study, 22 were ranked as gender equal and 101 as gender unequal.

From these 123 companies, 2861 employees from 21 companies were invited to take part in the survey; and of these 2861 invitees, 1407 agreed to participate. In total, 619 respondents in the survey study worked in companies ranked as gender equal according to the GENI 1/OGGI-index and 788 worked in gender-unequal companies. Of the 619 that worked in gender-equal companies according to GENI 1/OGGI, 505 perceived their company to be gender equal. Of the 788 that worked in companies ranked as unequal, 651 ranked their company as equal (GESP 1).

We measured gender equality in organizations, in this case companies, using two different methods, GENI 1 and GESP 1, presented below as case 1, case 2, case 3 and case 4.

In the first case (paper II), gender equality was measured using the register-based GENI 1 index. This shows an increase in days on sickness benefit at company level for both men and women in the gender-equal companies, see table 8. The increase was larger for men than for women, which supports the theory of convergence of health disparities when gender equality increases. The quotas in case 1 were reported at sector level: the quotas in the Computer sector were 2.15 for gender-equal companies and 3.23 for gender-unequal companies; the corresponding quotas for the Grocery production sector were 1.82 and 2.22 respectively. The differences between the sectors are large.

Men's risk of sickness absence increased by 1.8 (95% CI 1.7-2.0) compared to women's risk of sickness absence, which increased by 1.4 (CI 1.3-1.5). The overall risk that increased by 1.7 (CI 95% 1.6-1.9).

Table 8 Case 1

Gender Equality Measurement	Health Measurement	Outcome for Men	Outcome for Women
Increased GENI 1	Sickness benefit	Higher sickness absence	Higher sickness absence

In the second case (paper III), we measured the association between the register-based GENI 1 index and self-rated health. No associations were found for either men or women, see table 9. About 80% of the men and 75% of the women in gender-equal companies reported their health as good, while in gender-unequal companies the corresponding figures were 82% and 79% respectively.

Table 9 Case 2

Gender Equality Measurement	Health Measurement	Outcome for Men	Outcome for Women
Increased GENI 1	Self-rated health	No association	No association

In the third case (cover story), we measured gender equality using GESP1, self-perceived gender equality at work; health was measured by self-reported sick leave. Here the pattern differed: gender-equal companies recorded fewer days of sick leave for both men and women, see table 10. This result is the opposite of the first case. In case tree sick leave includes all absences due to sickness that the respondent can recall, both short-term and long-term absence. The differences in the results involve changes in both the health measurements and the gender equality measurement.

In this case, we also see fewer differences between men and women in gender-equal companies, again supporting the theory of convergence. The quotas between men and women in gender-equal companies were 2.36 and in gender-unequal companies 2.52.

Table 10 Case 3

Gender Equality Measurement	Health Measurement	Outcome for Men	Out come for Women
Increased GESP 1	Self-reported sick leave	Less sickness absence	Less sickness absence

In the fourth case (paper III), the same measurement of gender equality at company level, GESP 1 was used again. Health was measured by the self-rating question “How do you rate your health?” The patterns of association between gender-equal companies and health changed with different measurements see table 11. In the survey study, an association was found between women’s perceptions of gender equality at work and self-rated health. These results remained after adjusting for age, education, income and employment. Women who perceived their company as totally equal (OR 2.7 with 95% CI 1.4 – 5.3) or quite equal (OR 2.7 with 95% CI 1.6 – 4.5) had higher odds of reporting their health as good. Although the same pattern could be seen for men, this was not significant after adjusting for age, education, income and employment: totally equal OR 1.6 with 95% CI 0.9 – 2.8; quite equal OR 1.6 with 95% CI 0.9 – 2.5.

Table 11 Case 4

Gender Equality Measurement	Health Measurement	Outcome for Men	Outcome for Women
Increased GESP 1	Self-rated health	Increased health*	Increased health

* Non-significant

At Couple relational level (Paper IV)

In total 1407 persons, 875 (62.2%) men and 532 (37.8%) women answered the survey study. The mean age for men was 42.25 years and for women 42.70 years. The men had a slightly higher educational level than the women. The great majority of the men, 92% worked full time, while the level for women was 73%.

Two different measurements for gender equality in the couple relationship were evaluated.

The measurement GENI 2/*Self-reported gender equality in the couple relationship* was calculated for the 685 (439 men and 246 women) respondents who had both a partner and at least one child.

The GENI 2 index was constructed by measuring equality between the respondent and her/his partner in three domains. These were: domain 1 background variables, domain 2 sharing of time and responsibilities, and domain 3 sharing of parental leave and temporary parental leave. The self-reported “normative” index deals to some extent with the same variables as the gender equality index created in the register study: income, employment grade, educational level, and division of parental leave and temporary parental leave. To this was added information on the division of time and responsibilities in the household. The association between the self-reported gender equality index and self-rated health was calculated using multivariable logistic regression.

GESP 2/*Self-perceived gender equality*: 93.4% of respondents with a partner, 1090 persons, perceived their relationship as gender equal. Of the men, 96.6% perceived their relationship as equal; for the women, the figure was 88.2%.

In the fifth case (paper IV), higher levels on the GENI 2 index gave higher odds for good health, for both men and women, see table 12. The association was stronger for women, though not significant for either men or women. The GENI 2 index was presented in three tertiles with the least equal tertile as the base line. The odds ratios were as follows: for men, 1st tertile OR 1.3 with 95% CI 0.7-2.4, 2nd tertile OR 1.0 with 95% CI 0.6-1.8; and for women, 1st tertile OR 1.8 with 95% CI 0.8-4.0, 2nd tertile OR 1.1 with 95%CI 0.5-2.6.

Table 12 Case 5

Gender Equality Measurement	Health Measurement	Outcome for Men	Outcome for Women
Increased GENI 2	Self-rated health	Slightly increased health*	Increased health*

*Non-significant

In the sixth case (paper IV), gender equality was measured by GESP 2 as self-perceived gender equality in the couple relationship. GESP 2 was associated with good self-rated health for both men and women, see table 13. For men the odds were OR 5.6 with 95% CI 2.0-15.2 in completely equal relationships and OR 4.6 with 95% CI 1.7-12.3 in relatively equal relationships. The same trends were seen among women, though these were not statistically significant: OR 1.6 with 95% CI 0.6-4.5 and OR 1.1 with 95% CI 0.5-2.7.

Table 13 Case 6

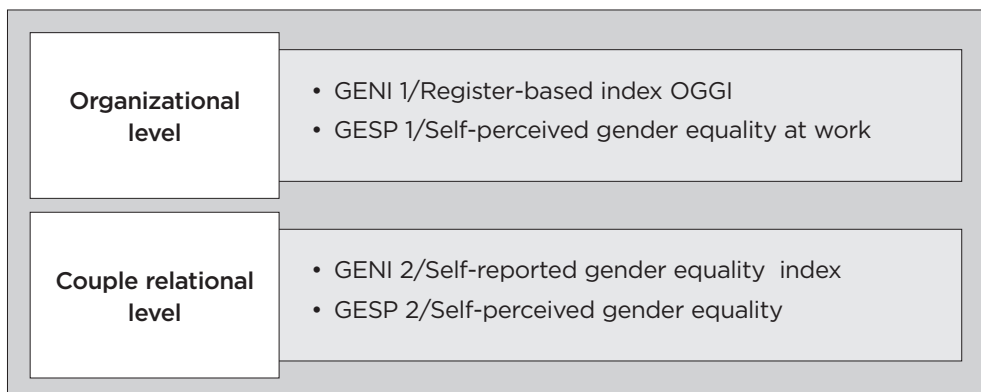
Gender Equality Measurement	Health Measurement	Outcome for Men	Outcome for Women
Increased GESP 2	Self-rated health	Increased health	Increased health*

*Non-significant

Comparing gender equality

None of the normative indices measuring gender equality figure 6 below was confirmed by respondents when asked about their own opinion of gender equality. The normative measurement differs from the self-perceived gender equality regardless of level.

Figure 6 Tested GE measurements



Gender equality at work

At organizational level (Paper I, Paper II and Paper III)

In the register study, 22 companies were ranked as gender equal and 101 as gender unequal. The quotas varied from 1.13 to 2.14.

Of the 1407 respondents, 619 worked in companies ranked as gender equal (with a quota between 1 and 1.5 in the GENI 1/OGGI index); 788 worked in companies with quotas over 1.51, i.e. in gender-unequal companies. Of the 619 that worked in companies ranked as equal, 505 perceived their company to be gender equal. Of the 788 that worked in companies ranked as unequal, 651 ranked their company as equal.

The respondents perceived their companies to be much more gender equal than our ranking in the index.

Table 14 Dissimilarity between the normative index GENI 1/OGGI and the self-perceived gender equality GSP 1 in the survey study

	GESP 1 Equal	GESP 1 Unequal	TOTAL
GENI 1/OGGI Equal	505	114	619
GENI 1/OGGI Unequal	651	137	788
TOTAL	1156	251	1407

Gender equality between couples

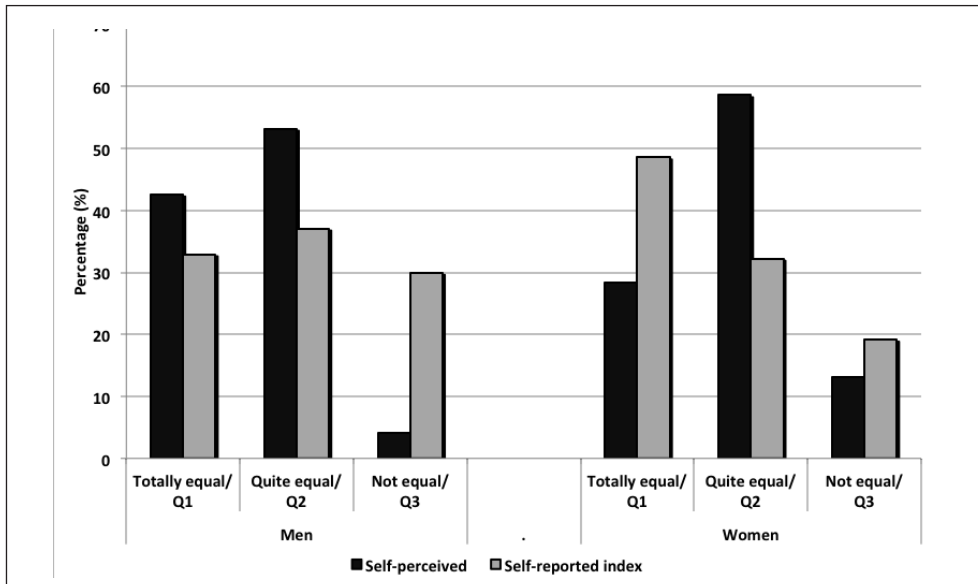
At individual level (Paper III and Paper IV)

Consistency between the index and self-perceived gender equality is even less at individual level (see figure 7).

The *Self-reported index of gender equality between couples/GENI 2* was calculated for the 685 (439 men and 246 women) respondents who had both a partner and at least one child. A correlation matrix and Barlett's test indicated that all six variables included in our self-reported index were correlated with each other. In the PCA, the two first components which captured and explained 46% of the variation were selected. The weighted kappa statistics were used to accommodate the ordinal nature of the response scale and quadratic weight was used in the calculation.

Self-perceived gender equality/GESP 2: 93.4% of respondents with a partner, 1090 persons, perceived their relationship to be gender equal.

Figure 7 GENI 2 versus GESP 2



Gender differences

Gender equality

Compared to men, fewer women perceived gender equality at work: 80.2% of women perceived their company to be *totally* or *quite equal*, while 86.1% of men perceived their company to be *totally* or *quite equal*.

Also when comparing gender equality in the couple relationship, one can note different patterns for men and women (see figure 7).

Women report higher gender equality, while men perceive higher gender equality. In the total survey study, 96% of men and 87% of women perceived their couple relationship to be gender equal. In the group of 685 that were part of the self-reported gender equality index, one can see the same large difference in how men and women perceive versus report gender equality. Among men the number perceiving their relationship as equal was 96.6%; among women the figure was 88.2%.

In this study, days on parental leave were distributed as follows: 86.6% of women reported taking the greater part of parental leave, while only 1.8% of men reporting doing so. However, even when women had stayed at home for the greater part of parental leave, they still perceived their relationship to be equal.

Health

Men recorded better health regardless of measurement method. In the register study, 88.8% of men and 81.8% of women in gender equal companies and 93.6% of men and 86.4% of women in gender-unequal companies had no absence from work with sickness benefit. In the survey study, 82% of men and 78% of women rated their health as good.

In the survey study there was also a question on sick leave in the past year: 58.4% of men and 44% of women reported taking no sick leave in the previous year.

Discussion

The results of this study show that gender equality has an impact on health and that it can be measured.

The impact of gender equality on health is not straightforward, however, and the measurements used are not ideal. Even though the results diverge somewhat and the gender equality measurements are not commensurable, the impact of gender equality – or rather a *lack* of gender equality – remains. I will use the three theories presented in the conceptual framework (see page 21) to discuss and support the conclusions presented below. The theories will also serve as a structure for the discussion.

The theory of eco-social embodiment

The differences in health patterns between men and women are well known and have been often investigated; however, the explanations offered are many (Flouri & Malmberg, 2011; Maintier, Joulain, & Floc'h, 2011; Simone, et al., 2011). At present, no theory has been able to provide a full explanation of the origin of these differences.

The focus of this thesis is gender equality. In the thesis, I am looking for possible similarities rather than differences between men and women. I have no wish to deny that biology differs between men and women, although I believe that many of the differences viewed as biological are acquired, as men and women live different lives from birth. The three health measurements used in the thesis are: 1) self-reported sickness absence in the past year, 2) the number of days of sickness absence over 15 days, derived from the registers, and 3) self-rated health. All three measurements are likely to be comprehended by respondents as physical measures of ill health. The epidemiologist Nancy Krieger offers a theory that establishes a link between biology and social context. With her theory of eco-social embodiment, Krieger offers an explanation for how the biological and social determinants interoperate in the construction of human health.

The core constructs described in the introduction enable us to understand how humans literally incorporate, biologically, in the societal and ecological context, the material and social world we live in. In a society that expects such different actions and behaviour from men and women as Swedish society, health outcomes will be different for men and women. The interactive pathways will include the influence of exposure to social and economic deprivation, the exogenous hazards, the social trauma, the harmful commodities, the degrading health care systems, and so on. The interplay of exposure, susceptibility and resistance will accumulate across the life course, also affected by the timing and accumulation of, and

responses to, embodied exposures involving gene expression rather than simply gene frequency.

Accountability and agency for both the social diversity in health and in research can also add to explanations regarding these inequities. Men and women live different lives from the very beginning: they are exposed to and respond to different interactive pathways of embodiment. With increased gender equality, the differences decline.

Embracing biology but not the dominant biomedical model, the idea of embodiment works on the assumption that the social determinates of health are exogenous to people's bodies and cannot be reduced to supposed innate characteristics, even if individual biological characteristics and variability do matter (Krieger, 2011). This could explain why women have greater ill health than men, and how the decrease in differences in incomes, responsibilities, education and so on affects the perception of health.

The theory of eco-social embodiment offers an explanation for how gendered society and subordination can create ill health that is measurable biometrically. However, it is still important to relate this theory to the theory of convergence.

The theory of convergence

In our research, a register-based evaluation of the relationship of gender equality to health (sickness benefit), sickness absence was higher in gender-equal companies for both men and women. The risk of sickness absence increased by 1.8 (95% CI 1.7-2.0) for men compared to 1.4 (CI 1.2-1.5) for women. The overall risk increased by 1.7 (CI 95% 1.6-1.8).

However, the *difference* between men's and women's sickness absence decreased in gender-equal companies.

When the health measurement was changed to self-rated health, but with gender equality still measured by the OGGI index, the pattern remained the same: gender equality measured by the index reduces the sense of good health even though the result was no longer statistically significant. These findings support the theory of convergence of inequities in health between men and women with increased gender equality.

When the measurement of gender equality was changed from the OGGI index to self-perceived gender equality at work, and the measurement of health was changed from sickness benefit (15 days and over) to self-reported sickness absence (total number of days in the past year), a new pattern was seen. In this case, sickness absence was lower in gender-equal companies. Nevertheless, when gender equality at organizational level increases, i.e. increased equality in income, education, shared household duties and parental leave, *similarities* in health also increase. However, health did not necessarily improve.

Gender equality between couples was also measured using two different measurements: self-reported gender equality, constructed as an index with three domains, and self-perceived gender equality. The health outcome at individual level was measured as self-rated health (SRH). We found an association between self-perceived gender equality and SRH for men but not for women. At couple relationship level, too, a convergence of health can be found with increased gender equality. Health differences between men and women were greater when respondents rated themselves as unequal. Male respondents with a high rating on the self-reported gender equality index also reported good health. In 84.8% of cases gender-equal men reported good health, compared to 82.4% for women. For gender-unequal respondents, the proportions rating their health as good were 50% for men and 74.2% for women, i.e. a greater difference for unequal respondents. With the self-reported gender equality index, the difference between men and women showed the same pattern: 84.5% of gender-equal men reported good health, while only 80.8% of gender-unequal men did so. For women, 82.2% of gender-equal and 71.7 of gender-unequal women reported good health. Even if we were unable to show a direct association between gender equality and better self-rated health, we cannot be certain that no such association exists. Health, just as gender equality, is a concept with many varied explanations.

Even though mortality rates were not part of this study, they still are part of the health differences between men and women. These mortality differences between men and women are greatest in young adults, mainly explained by an excess mortality in young men from injuries and violence, often connected to alcohol. However, there is a tendency – at least in Western societies – for men to adopt healthy lifestyles similar to women's, such as consciousness about the body and its functions, and for women to adopt less healthy behaviour, such as increased smoking and alcohol consumption. These behavioural changes seem to be leading to a convergence in health patterns. In the 1970s, the sex difference in longevity in Sweden was about six years but has now decreased to about four years. Lung cancer is increasing among women but decreasing among men, and the use of hospital care is now at the same level for men and women between the ages of 45 and 64 (Statens Folkhälsoinstitut, 2009). The construction of masculinity, as described by many researchers with an interest in health disparities, has a negative impact on men's healthcare-seeking behaviour and survival (Courtenay, 2000; Kimmel, Hern & Connell, 2005; Schofield, Connell, Walker, Wood & Butland, 2000).

Gender equality at company level might influence sickness absence patterns. In an environment where men, just like women, are expected to participate in the upbringing of small children and stay at home when children are sick, it might also be acceptable to stay at home when you are sick – even if you are a man (Personal communication, Connell 2010). Although changes in mortality patterns are

obviously connected to changes in smoking and drinking patterns, one could argue that steps towards increased gender equality are an underlying cause. Being a present and committed father may mean reducing mortality risks (Ringbäck-Weitof, Burström & Rosén, 2004). This development can already be seen in men participating in their children's upbringing (Månsdotter & Lundin, 2010). The long-standing life expectancy gap between men and women appears to be closing in many societies: men are taking better care of their health than before and are leading less risky lives, while women are adopting more traditionally masculine behaviours such as smoking and alcohol consumption (Backhans, Lundberg & Månsdotter, 2007).

This could mean rejection of the hypothesis that increased gender equality leads to lower levels of sick leave and to economic growth (Forsythe, Korzeniewicz, & Durrant, 2000; Hausmann, et al., 2010). However, it is important to note that many other factors have been shown to affect sickness absence patterns (Bäckman, Bryngelsson, & Lundberg, 2007; Dutrieux & Viksten, 2004; Macintyre, Ford, & Hunt, 1999; Smeby, Bruusgaard, & Claussen, 2009). Moreover, for some researchers, convergence of male and female health patterns could itself justify increased gender equality (Moller-Okin, 1989).

The theory of justice to gender

In our research, men and women did not show the same associations between the two measurements of gender equality at couple relationship level. The study found that men perceived higher gender equality than they reported; for women the reverse was the case – they perceived lower gender equality than they reported. Men seem to regard themselves as gender equal, disregarding practical outcomes that they themselves reported. It might be difficult for men to acknowledge these differences, as men constitute the beneficiary group. This conclusion could be supported by the fact that women perceived less gender equality even when they reported a relatively high consistency of measurable indicators in their daily practice. These two findings highlight the risk of failing to capture the core of the concept of gender equality. Power dynamics are known to be central in relationships (Marmot, 2004). Presumably, the distribution of power is very central for how people perceive gender equality, but power is difficult to describe and above all difficult to measure. Rönnblom (1997) has developed a model for analysing different interpretations of power. The model outlines three power levels: 1) open power, 2) the power of the agenda and 3) the privilege of constituting the norm (Rönnblom, 1997). In this model, measuring only open power, i.e. the number of men and women as in the OGGI index of our study, is considered a superficial analysis. The next level, the power of the agenda, is of course more difficult to measure in

register data but could be included in a survey, for example by the question: “Do you feel that you have the power to set the agenda?” How well this will describe power distribution is an open question. The third level, the privilege of constituting the norm, is even more difficult to capture. This is defined by Rönnblom as the deepest expression of power. In medicine, this power level is easily recognized as the norm of the male patient. In the not-too-distant past, women’s differences to men as observed in medicine, which sometimes depended on biology, were deemed “abnormal”. Register data might provide information that is useful for the analysis of normativity: the information revealed by the exposure of merged data might be so elusive that only when merged and presented as figures can the pattern become clear. Register data might unite information and reveal facts in a way that interviews more seldom do. However, the facts revealed must be placed in context. The fact that women as a group still take nearly 80% of available parental leave is an example that must be revealed at register level. Families tend to think that their division on parental leave is an internal solution depending only on their private situation. They cannot see that they are influenced by a societal norm where supposedly private decisions are part of a common discourse. In our study, however, it was obvious that the big picture also has a bearing on the personal level.

Considering a relationship in which one of the partners takes more than 80% of the days allotted for childcare to be gender equal must be understood in its social context. The Swedish political discussion on the privacy of family decisions is founded on a societal norm formed by the global neoliberal context (Bacchi & Eveline, 2003; Bacchi & Eveline, 2010; Bjereld & Demker, 2011).

In the Swedish context, it is politically correct to view gender equality as an important political goal. However, it is also the norm to consider the family a private sphere in which couples make their own decisions and exercise freedom of choice (Kristdemokraterna, 2010). The idea of gender equality as a private matter is the core of the critique formulated by Moller-Okin in her theory of Justice to gender.

Western societies are proud of their democratic values, and their constitutions stress the importance of justice for all. Still, large differences in justice between men and women are accepted. The injustice that results from the division of labour between men and women affects everyone in society, though in different ways. If families were more democratic in this respect, they would better serve as the first possibility to develop a sense of fairness in their children (Moller-Okin, 1989). Many consider the division of labour and duties within the family to be a private matter and a decision for the family without the involvement of the community. However, justice is by no means always enhanced by maximization of freedom for the individual, especially not in a system unbalanced at the outset.

Moller-Okin argues, that as long as the family is accepted as a closed domain where people can make their own choices about what gender equality is, reproduction of the gender inequalities will continue. The reproduced inequalities will affect children more than their parents, as they will have less chance to freely shape their lives if there is only one model to choose from. In her book, Moller-Okin imagines a genderless society where justice and obligations are shared equally with no regard to sex. Moller-Okin argues for justice for all, not only for men.

In our research, the differences between people's own opinions on gender equality (self-perceived gender equality) and our model attempting to visualize the national objectives (the self-reported gender equality index) can be interpreted in at least two ways. The first interpretation is that people themselves know whether or not they are gender equal. This view is supported by the idea of the free will and the individual's right and freedom to choose. However, in a relationship there are of course at least two individuals who can claim the right to choose. A second possible interpretation might be that the difference itself constitutes an example of "doing gender" (Connell, 2009). Viewing an unequal division of household work as gender equal could be a way of maintaining the prevailing systems – i.e. a way of allowing two different norm systems to exist side by side. On the one side the discourse on gender equality as a goal of Swedish society, and on the other the discourse of the traditional family norm system with different obligations for men and women. Many families with small children will recognize the situation where all available energy is needed to make everyday life function as smoothly as possible (Magnusson, 2006). By describing this situation as self-elected and preferable it is justified, at least to oneself. Susan Moller-Okin argued that the family is not, and cannot be viewed as, the "non-political" area. Social justice is a political goal in a democratic society, and theories of justice need to apply their standards even to the family. Moller-Okin also showed that when the family is argued as belonging to the private sphere, almost all justice theorists assume that the "individual" in a family means the male head (Moller-Okin, 1989).

The differences found between men's and women's views of gender equality might mean that it is not possible to condense the current gender equality situation in a relationship in a single question. Many researchers have focused on people's attitudes to and views of gender equality, but few have assessed the consequences of attitudes on behaviour (Halman, 2001; Lewis, 2005).

Gender equality is not a private matter: it is a social equity concern important both at population level and at individual level. Eco-social theory, referred to several times in this thesis, includes the construct and process of embodiment. Nancy Krieger claims that our bodies tell stories that cannot be studied separately

from our conditions, they tell stories which do not always match people's stated accounts, and finally they tell stories that people cannot or will not tell because they are unable to, forbidden or choose to not tell (Krieger, 2004). At a population level, registers also tell stories that cannot be studied separately from our conditions, they tell stories that do not always match people's stated accounts, and they tell stories that people cannot or will not tell because they are unable to, forbidden or choose to not tell. Register data and survey data are both necessary to draw a comprehensive picture.

Figure 8 The impact of gender equality on health

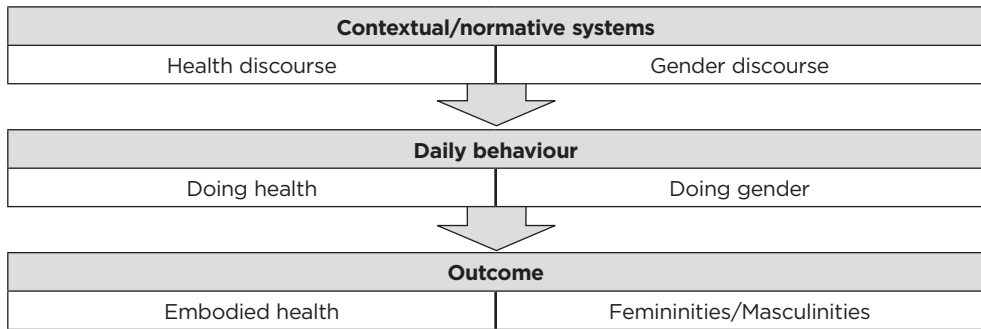


Figure 8 shows how the contextual/normative systems in society influence our daily practice. Although the results of this thesis suggest that there might be different levels of normative thinking, it is everyday practice that creates the outcome of health and the gender system.

Methodological considerations

Strengths and limitations

A register index is easy to create and use and is economically justifiable. It can contain data from official registers or from an organization or company. Our register study was large and showed how such data can be used to increase knowledge of gender equality issues. The use of a few variables, easily found in official registers and company records, makes it possible to repeat the study regularly.

The variables are the same as those used in a number of different register indices at both national and international level.

Measuring gender equality is a risky proposition. Elusive and political concepts such as gender equality have many different interpreters, and many will claim to be the one who knows what gender equality really is. So any model for gender analysis can never be solely a technical tool – it will always raise comments in the ongoing debate (March, Smyth & Mukhopadhyay, 1999/2005). The so-called

“two-sex model”, i.e. comparing men and women, is the basis of this thesis. Although this model is almost ubiquitous in gender equality research, there are good grounds for its severe criticism (Magnusson, Rönblom & Silius, 2009). The two-sex model maintains heteronormativity as the norm for society both at individual and structural level.

All selected variables have limitations and strengths. The first variable in the index, “Number of employees”, has been questioned several times. Obviously, power does not shift automatically when the outnumbered sex grows in number. Nevertheless, we argue that the number of men and women present at a workplace has importance for power relations. Previous research has shown that an increase in the proportion of the gender minority could lead to changes in for instance political culture, political discourse and even in the acceptance of women as politicians (Dahlerup, 1988). An Australian empirical study showed that the presence of women in senior roles changed management cultures in favour of acceptance of women as leaders (Chesterman, Ross-Smith & Peters, 2005). The remaining variables in our study – education, income, full-time/part-time work, parental leave and temporary parental leave – are all well known and often used in gender equality indices. They are also less discussed as essential elements of the gender equality concept.

The use of few variables of course also leads to compromises. Thus, when effectiveness and acceptability are important as in our index, other potentially important concerns have to take a back seat. The need for short questionnaires and easily manageable indices is always important for researchers so that the “response burden” can be reduced. Many good examples of shortened questionnaires/instruments are also used (Muhonen & Torkelson, 2005).

Our study has shown that when the relationship between health and gender equality is evaluated, at least three possible perspectives are involved: how to measure gender equality, how to measure health and whom to place in focus. This dependence on measurement is far from new: many researchers have shown different outcomes with different measures (Atkinson, 1970; Bacchi, 2004; Backhans, Burström, Lindholm & Månsdotter, 2009; Muhonen & Torkelson, 2004). For the major indices used by UN bodies, there has been a great deal of evaluation and new indices have been constructed (Bardhan & Klasen, 1999; Charmes & Wieringa, 2003; Cueva, 2006; Dijkstra, 2002).

In our study, we are measuring the gap but give no direction. The most common way to measure gender equality is to take the standpoint that in a gender-structured society women are the most vulnerable. However, as the *convergence theory*, which is an important theory for this thesis, hypothesizes that differences between the sexes per se lead to different health outcomes, we chose to measure the gap without direction.

Reliability

The reliability of the OGGI index and the health measure of sickness benefit is probably quite good, as we have used official registers of high quality. As long as the same procedure is maintained for the calculations, the same results should be obtained.

The reliability of the other three gender equality measures used in the thesis is more difficult to estimate: they are all self-perceived or self-reported and thus depend on how people respond to the questions and whether respondents understood the questions as intended. None of the questions in the questionnaire was tested for reliability.

Validity

In this thesis, different measurements were tested and critically assessed. The normative standpoint chosen to illustrate gender equality was the Swedish “National objectives for gender equality in Sweden”. The fourth interim objective of this policy that “*Men’s violence against women shall come to an end. Women and men, girls and boys, shall have equal rights and opportunities to physical integrity*”, was not included in the index which reduces the validity of the illustration of the policy. In addition, the selection of variables from the registers and in the questionnaire may reduce the validity.

In the OGGI index, register data were used to measure gender equality. Two factors characterize the basis of this index: the normative starting point and the similarity to earlier gender equality indexes. To achieve the best possible measurement, we decided to remain relatively close to other normative indexes measuring gender equality, such as the Global Gender Gap Index and EqualX (Hausmann et al., 2010; Statistics Sweden et al., 2006).

Conclusions

This thesis, which presents results from both a register study and a cross-sectional survey, shows that gender equality impacts the health of both men and women.

- The study has resulted in two normative indices. The first is for use at organizational level and comprises register data. The second is at couple relational level and is based on questionnaires and two measurements evaluating self-perceived gender equality, one for the workplace and one for the couple relationship. Comparison of the measurements shows that both daily practice and perceptions are important when evaluating gender equality.

- Men's perceptions of gender equality in their partner relationship are higher than their own reported division of household work and responsibilities. In contrast, the most gender-equal women perceive less gender equality than they report.
- The impact of gender equality on health remains despite the differences found between the measurements of gender equality and the measurements of health.
- People's health depends on both their biological and their social determinants. The eco-social theory, part of the theoretical framework of this thesis, offers an explanation for why the health outcome differs for men and women.
- Differences in health decrease with greater gender equality. In this thesis, this is explained by the theory of convergence. If gender equality increases, the lives of men and women will differ less; this will also lead to fewer differences in health. The increase in men's days on sickness benefit in gender-equal companies supports the convergence hypothesis. This theory suggests that gender equality will affect men and women differently: with greater gender equality men will show increased morbidity and reduced mortality, while women will show reduced morbidity and increased mortality.

Future research and implications for action

The OGGI index can be used to monitor the development of gender equality in Swedish society and its possible impact on health. Longitudinal research at organizational level could contribute to the development of the field.

The discrepancy between the measurements should be further examined. Differences are not in themselves proof of one measurement being better than another. Disregarding information on normative levels and using statements from individuals only will mean missing important information on the practical outcome of daily decisions. People do their best to make life work, both at home and at work. This will inevitably involve taking decisions that seem appropriate today, but which do not contribute to “equal power to shape society and one’s own life” in the long run. The normative indices are there to make us see what we are too close to notice. Register data can contribute to a broader picture of gender equality; however, it is essential to use more than one method in research of gender equality.

The theoretical framework could be used for a deeper understanding of the duality in perceptions of gender equality observed in this thesis. Men and women both want to be modern and gender equal, at the same time as they are acting rationally and solving domestic problems in the most practical way, which often means conforming to traditional family divisions and household chores remaining the responsibility of the woman.

A future challenge is to develop policy documents that support the public health sector in promoting gender equality as important issue for health. Despite the acclaimed agreement on the Swedish Objectives for Gender Equality, different uses of the concept of gender equality emerge when we examine the documents of the political parties in detail. On the one hand, there is a strong consensus on gender equality as a goal for society; on the other hand, there are very considerable differences in the practical political implications of gender equality policies (Magnusson, 2000).

Thus, the results of this study show the need for further discussion and studies on how to understand gender equality and its impact on health. In public health there are always choices between individual-centred interventions and interventions at organizational or structural level. The current results point to impacts on health both in the couple relationship and in working life.

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Appendix

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Bakgrundsoppgifter

1. Är du kvinna eller man?

1 ☐ Man

2 ☐ Kvinna

2. Vilket år är du född?

År:

3. Vilken är din högsta utbildning/examen?

1 ☐ Folk- eller grundskola

2 ☐ Gymnasium eller motsvarande

3 ☐ Högskola/universitet

4. Vilket yrke är du verksam inom?

Ange yrke så specifikt som möjligt. T.ex. vårdbiträde, gymnasielärare, taxichaufför

Exempel:

Yrke:

5. Vilken är din huvudsakliga anställningsform?

1 ☐ Fast/tillsvidareanställning

2 ☐ Egen företagare

3 ☐ Projekt/objektsanställd

4 ☐ Vikariat

5 ☐ Provanställd

6 ☐ Behovsanställd (rycker in vid behov)

7 ☐ Säsongsanställd

8 ☐ Annan tidsbegränsad anställning

6. Vilken sysselsättningsgrad har du?

1 ☐ Heltid 90-100 % → Gå till fråga 8

2 ☐ Deltid 50-89%

3 ☐ Deltid mindre än 50%

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<p>7. Har du själv valt att arbeta deltid?</p> <p>1 <input type="checkbox"/> Ja</p> <p>2 <input type="checkbox"/> Nej</p>
<p>8. Vilka arbetstider har du?</p> <p>1 <input type="checkbox"/> Dagtid</p> <p>2 <input type="checkbox"/> Nattetid</p> <p>3 <input type="checkbox"/> Både dag och natt</p>
<p>9. Vilken är din inkomst före skatt per månad?</p> <p>1 <input type="checkbox"/> 15.000 kr eller mindre</p> <p>2 <input type="checkbox"/> 15.001 kr – 20.000 kr</p> <p>3 <input type="checkbox"/> 20.001 kr – 25.000 kr</p> <p>4 <input type="checkbox"/> 25.001 kr – 30.000 kr</p> <p>5 <input type="checkbox"/> 30.001 kr eller mer</p>
<p>10. a) Har du varit sjukanmäld under de 12 senaste månaderna? <i>Gäller ej vård av sjukt barn</i></p> <p>1 <input type="checkbox"/> Ja</p> <p>2 <input type="checkbox"/> Nej → <i>Gå till fråga 11</i></p> <p>Om ja:</p> <p>b) Hur många dagar har du sammanlagt varit sjukanmäld?</p> <p>1 <input type="checkbox"/> 1-7 dagar</p> <p>2 <input type="checkbox"/> 8-14 dagar</p> <p>3 <input type="checkbox"/> 15-30 dagar</p> <p>4 <input type="checkbox"/> 31-90 dagar</p> <p>5 <input type="checkbox"/> Mer än 90 dagar</p>
<p>11. Är du gift/sambo?</p> <p>1 <input type="checkbox"/> Ja</p> <p>2 <input type="checkbox"/> Nej → <i>Gå till fråga 21</i></p>
<p>12. Hur bedömer du jämställdheten i din parrelation?</p> <p>1 <input type="checkbox"/> Helt jämställd</p> <p>2 <input type="checkbox"/> Ganska jämställd</p> <p>3 <input type="checkbox"/> Inte särskilt jämställd</p> <p>4 <input type="checkbox"/> Inte jämställd alls</p>

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19. Vilken är din partners inkomst före skatt per månad?

1 ☐ 15.000 kr eller mindre

2 ☐ 15.001 kr – 20.000 kr

3 ☐ 20.001 kr – 25.000 kr

4 ☐ 25.001 kr – 30.000 kr

5 ☐ 30.001 kr eller mer

Fördelning av hemarbete

20. Har du eller din partner använt mest tid åt följande arbetsuppgifter under de senaste 6 månaderna? Tänk på en normalvecka!

	Jag har använt mest tid	Min partner har använt mest tid	Vi har delat lika	Ej aktuellt
	1	2	3	4
a. Städning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Matlagning/diskning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Regelbundna inköp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Tvätt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Underhåll/reparationer av bostad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Skötsel av bilen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Hämta och lämna barnen på dagis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Föräldramöten, utvecklingssamtal, barnens tand- o sjukvårdsbesök mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Hämta och lämna barn på fritidsaktiviteter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Omsorg om gamla/sjuka släktingar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Planera och organisera hemarbetet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Barn

21. a) Har du några barn? Räkna med både egna och eventuell partners barn.

1 ☐ Ja

2 ☐ Nej → Gå till fråga 24

Om ja:

b) Vilket/vilka år är de födda?

22. Vem tar/tog ut mest föräldraledighet för dina barn?

1 ☐ Jag är/var oftast hemma

2 ☐ Den andra föräldern är/var oftast hemma

3 ☐ Vi är/var hemma lika ofta

<p>23. Vem är/var oftast hemma för att ta hand om dina barn när de är sjuka – s.k. tillfällig föräldraledighet?</p> <p>1 <input type="checkbox"/> Jag är/var oftast hemma</p> <p>2 <input type="checkbox"/> Min partner/barnets andra föräldern är/var oftast hemma</p> <p>3 <input type="checkbox"/> Vi är/var hemma lika ofta</p>
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Jämställdhet på arbetet

<p>24. Hur bedömer du jämställdheten på din arbetsplats?</p> <p>1 <input type="checkbox"/> Helt jämställd</p> <p>2 <input type="checkbox"/> Ganska jämställd</p> <p>3 <input type="checkbox"/> Inte särskilt jämställd</p> <p>4 <input type="checkbox"/> Inte jämställd alls</p>
<p>25. I vilken utsträckning tycker du att din arbetsgivare möjliggör anställning av underrepresenterat kön?</p> <p>1 <input type="checkbox"/> Mycket stor utsträckning</p> <p>2 <input type="checkbox"/> Ganska stor utsträckning</p> <p>3 <input type="checkbox"/> Ganska liten utsträckning</p> <p>4 <input type="checkbox"/> Mycket liten utsträckning</p> <p>5 <input type="checkbox"/> Vet inte</p>
<p>26. Bedömer du att män och kvinnor har likvärdiga möjligheter att göra karriär på din arbetsplats?</p> <p>1 <input type="checkbox"/> Ja</p> <p>2 <input type="checkbox"/> Nej</p> <p>3 <input type="checkbox"/> Vet inte</p>
<p>27. Hur upplever du inställningen till kvinnors föräldraledighet på din arbetsplats?</p> <p>1 <input type="checkbox"/> Positiv</p> <p>2 <input type="checkbox"/> Neutral</p> <p>3 <input type="checkbox"/> Negativ</p> <p>4 <input type="checkbox"/> Vet inte</p>
<p>28. Hur upplever du inställningen till mäns föräldraledighet på din arbetsplats?</p> <p>1 <input type="checkbox"/> Positiv</p> <p>2 <input type="checkbox"/> Neutral</p> <p>3 <input type="checkbox"/> Negativ</p> <p>4 <input type="checkbox"/> Vet inte</p>
<p>29. Förläggs möten på din arbetsplats, normalt sett, på tider som gör det lätt att ta ansvar för barn?</p> <p>1 <input type="checkbox"/> Ja</p> <p>2 <input type="checkbox"/> Nej</p> <p>3 <input type="checkbox"/> Vet inte</p>

Psykosocial arbetsmiljö

	Mycket sällan eller aldrig	Ganska sällan	Ibland	Ganska ofta	Mycket ofta eller alltid
	1	2	3	4	5
30. Finns det klart definierade mål för ditt arbete?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Vet du vilket ansvarsområde du har?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Vet du precis vad som krävs av dig i ditt arbete?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Belönas man för ett väl utfört arbete på din arbetsplats (pengar, uppmuntran)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Tas de anställda väl omhand på din arbetsplats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. I vilken utsträckning intresserar sig ledningen för personalens hälsa och välbefinnande?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Påverkar kraven i ditt arbete ditt hem- och familjeliv på ett negativt sätt?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Påverkar kraven från ditt hem/din familj ditt arbete på ett negativt sätt?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fysisk arbetsmiljö

Hur stor del av din arbetsdag...						
Markera med ett kryss på varje rad						
	Inte alls	1/10 av tiden	1/4 av tiden	Halva tiden	3/4 av tiden	Nästan hela tiden
	1	2	3	4	5	6
38. ... har du ett stillasittande arbete?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. ... arbetar du vid en bildskärm?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. ... har du ett så bundet arbete att du inte kan gå ifrån en kort stund när du vill?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Händer det att du i ditt arbete böjer eller vrider kroppen på samma sätt många gånger i timmen?						
1 <input type="checkbox"/> Nej, nästan inte alls, aldrig						
2 <input type="checkbox"/> 1-2 dagar per månad						
3 <input type="checkbox"/> En dag per vecka						
4 <input type="checkbox"/> 2-3 dagar per vecka						
5 <input type="checkbox"/> Varje dag						
42. Hur ofta lyfter eller bär du i ditt arbete föremål som väger mer än 10 kg?						

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- 1 ☐ Nästan aldrig eller aldrig
 2 ☐ 1-10 gånger per dag
 3 ☐ 11-50 gånger per dag
 4 ☐ Mer än 50 gånger per dag

Krav, kontroll och stöd i ditt arbete

	Ja, ofta	Ja, ibland	Nej, sällan	Nej, så gott som aldrig
	1	2	3	4
43. Kräver ditt arbete att du arbetar fort?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Kräver ditt arbete att du arbetar mycket hårt?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Kräver ditt arbete en för stor arbetsinsats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Har du tillräckligt med tid för att hinna med arbetsuppgifterna?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Förekommer det ofta motstridiga krav i ditt arbete?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Får du lära dig nya saker i ditt arbete?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Kräver ditt arbete skicklighet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Kräver ditt arbete påhittighet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Innebär ditt arbete att man gör samma sak om och om igen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Har du frihet att bestämma <u>hur</u> ditt arbete skall utföras?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. Har du frihet att bestämma <u>vad</u> som skall utföras i ditt arbete?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Stämmer helt	Stämmer ganska bra	Stämmer inte särskilt bra	Stämmer inte alls
	1	2	3	4
54. Det är en lugn och behaglig stämning på min arbetsplats.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. Det är god sammanhållning på min arbetsplats.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. Mina arbetskamrater ställer upp för mig.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. Man har förståelse för att jag kan ha en dålig dag.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58. Jag kommer bra överens med mina överordnade.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59. Jag trivs bra med mina arbetskamrater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Återhämtning efter arbetet

<p>Nedan följer ett antal påståenden om känslor som kan uppstå i samband med arbete. Svara utifrån de senaste 12 månaderna. Om du inte förvärvsarbetar just nu så svara utifrån ditt senaste jobb.</p>						
	Varje dag	Några ggr per vecka	Någon gång per vecka	Några ggr per månad	Någon gång per månad	Några ggr per år eller mindre
	1	2	3	4	5	6
60. Jag känner mig känslomässigt tömd av mitt arbete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61. Jag känner mig helt slut när arbetsdagen är över	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62. Jag känner mig trött när jag går upp på morgonen för att möta en ny arbetsdag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63. Att arbeta under en hel dag är verkligen påfrestande för mig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64. Jag känner mig utbränd av mitt arbetet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<p>Hur ofta... Svara utifrån de senaste 12 månaderna. Sätt ett kryss på varje rad.</p>					
	Aldrig	Någon gång per år	Några gånger per månad	Flera gånger per vecka	Varje dag
	1	2	3	4	5
65. ... känner du dig mycket pressad under arbetspasset?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
66. ... känner du dig mycket trött efter arbetspasset?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
67. ... händer det att du oroar dig för jobbet och inte kan koppla bort tankarna från det på fritiden?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
68. ... händer det att du har svårt att sova därför att tankarna på jobbet håller dig vaken?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69. ... har du tillräckligt med tid för återhämtning mellan arbetspassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70. ... känner du dig utvilad och återhämtad när du börjar arbetspasset?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<p>71. Hur mycket tid för egen avkoppling har du en vanlig dag (d.v.s. tid du rör över själv för att tillgodose dina behov av rekreation och eller vila, bortsett från sömn)?</p> <p>1 <input type="checkbox"/> Mindre än en timme om dagen</p> <p>2 <input type="checkbox"/> Cirka en timme</p> <p>3 <input type="checkbox"/> Cirka två timmar</p> <p>4 <input type="checkbox"/> Cirka tre timmar</p> <p>5 <input type="checkbox"/> Mer än fyra timmar</p>

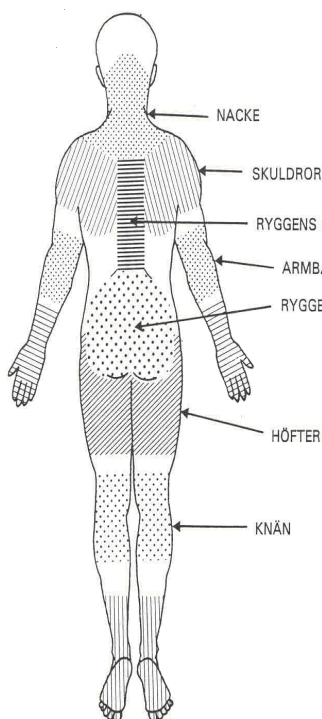
Hälsa och levnadsvanor

72. Hur bedömer du ditt allmänna hälsotillstånd?

- 1 ☐ Mycket bra
 2 ☐ Bra
 3 ☐ Någorlunda
 4 ☐ Dåligt
 5 ☐ Mycket dåligt

73. Besvär från rörelseorganen

Svara genom att sätta kryss i rutan för det lämpligaste svarsalternativet. Observera att alla frågor skall besvaras även om du inte har haft besvär i någon kroppsdel..



a) Har du haft besvär
(smärta värk, obehag)
någon gång under de
senaste 3 månaderna i:

b) Har du någon gång
under de senaste
3 månaderna inte
kunnat arbeta på
grund av besvären?

Nacken

1 ☐ Ja

2 ☐ Nej

1 ☐ Ja

2 ☐ Nej

Skuldror/axlar

1 ☐ Ja

2 ☐ Nej

1 ☐ Ja

2 ☐ Nej

Armbågar

1 ☐ Ja

2 ☐ Nej

1 ☐ Ja

2 ☐ Nej

*Ryggens övre del
(bröstryggen)*

1 ☐ Ja

2 ☐ Nej

1 ☐ Ja

2 ☐ Nej

*Ryggens nedre del
(ländrygg/korsrygg)*

1 ☐ Ja

2 ☐ Nej

1 ☐ Ja

2 ☐ Nej

En höft eller båda höfterna

1 ☐ Ja

2 ☐ Nej

1 ☐ Ja

2 ☐ Nej

Ett knä eller båda knäna

1 ☐ Ja

2 ☐ Nej

1 ☐ Ja

2 ☐ Nej

<p>74. Röker du dagligen?</p> <p>1 <input type="checkbox"/> Ja</p> <p>2 <input type="checkbox"/> Nej</p>
<p>75. Snusar du dagligen?</p> <p>1 <input type="checkbox"/> Ja</p> <p>2 <input type="checkbox"/> Nej</p>
<p>76. Hur mycket motionerar eller tränar du (på en nivå motsvarande minst en rask promenad) i genomsnitt under en normal vecka? <i>Räkna även med vägen till och från arbetet</i></p> <p>a) I vardagen (t.ex. cykling, promenader, tyngre hushållsarbete).</p> <p>1 <input type="checkbox"/> Mindre än 1 timme per vecka</p> <p>2 <input type="checkbox"/> 1-2 timmar per vecka</p> <p>3 <input type="checkbox"/> 3-4 timmar per vecka</p> <p>4 <input type="checkbox"/> 5 timmar eller mer per vecka</p> <p>b) Under motion och träning (t.ex. "gympa", joggning, fotboll, ridning).</p> <p>1 <input type="checkbox"/> Mindre än 1 timme per vecka</p> <p>2 <input type="checkbox"/> 1-2 timmar per vecka</p> <p>3 <input type="checkbox"/> 3-4 timmar per vecka</p> <p>4 <input type="checkbox"/> 5 timmar eller mer per vecka</p>

Markera genom att kryssa i en ruta i varje nedanstående grupp, vilket påstående som bäst beskriver ditt hälsotillstånd i dag.

<p>77. Rörlighet</p> <p>1 <input type="checkbox"/> Jag går utan svårighet</p> <p>2 <input type="checkbox"/> Jag kan gå men med viss svårighet</p> <p>3 <input type="checkbox"/> Jag är sängliggande</p>
<p>78. Hygien</p> <p>1 <input type="checkbox"/> Jag behöver ingen hjälp med min dagliga hygien, mat eller påklädning</p> <p>2 <input type="checkbox"/> Jag har vissa problem att tvätta eller klä mig själv</p> <p>3 <input type="checkbox"/> Jag kan inte tvätta eller klä mig själv</p>
<p>79. Huvudsakliga aktiviteter (t ex arbete, studier, hushållssysslor, familje- och fritidsaktiviteter)</p> <p>1 <input type="checkbox"/> Jag klarar mina huvudsakliga aktiviteter</p> <p>2 <input type="checkbox"/> Jag har vissa problem med att klara av mina huvudsakliga aktiviteter</p> <p>3 <input type="checkbox"/> Jag klarar inte av mina huvudsakliga aktiviteter</p>

<p>80. Smärtor/besvär</p> <p>1 <input type="checkbox"/> Jag har varken smärtor eller besvär</p> <p>2 <input type="checkbox"/> Jag har måttliga smärtor eller besvär</p> <p>3 <input type="checkbox"/> Jag har svåra smärtor eller besvär</p>
<p>81. Oro/nedstämdhet</p> <p>1 <input type="checkbox"/> Jag är inte orolig eller nedstämd</p> <p>2 <input type="checkbox"/> Jag är orolig eller nedstämd i viss utsträckning</p> <p>3 <input type="checkbox"/> Jag är i högsta grad orolig eller nedstämd</p>

Vi behöver din hjälp! Vi skulle vilja följa upp den här enkätundersökningen med ett antal personliga intervjuer och/eller gruppdiskussioner.

Kan du tänka dig att medverka i en intervju och/eller gruppdiskussion?

1 ☐ Ja

Jag heter

Kan nås på tel.nr.

Riktnummer

Nummer

2 ☐ Nej

Tack för din medverkan!

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