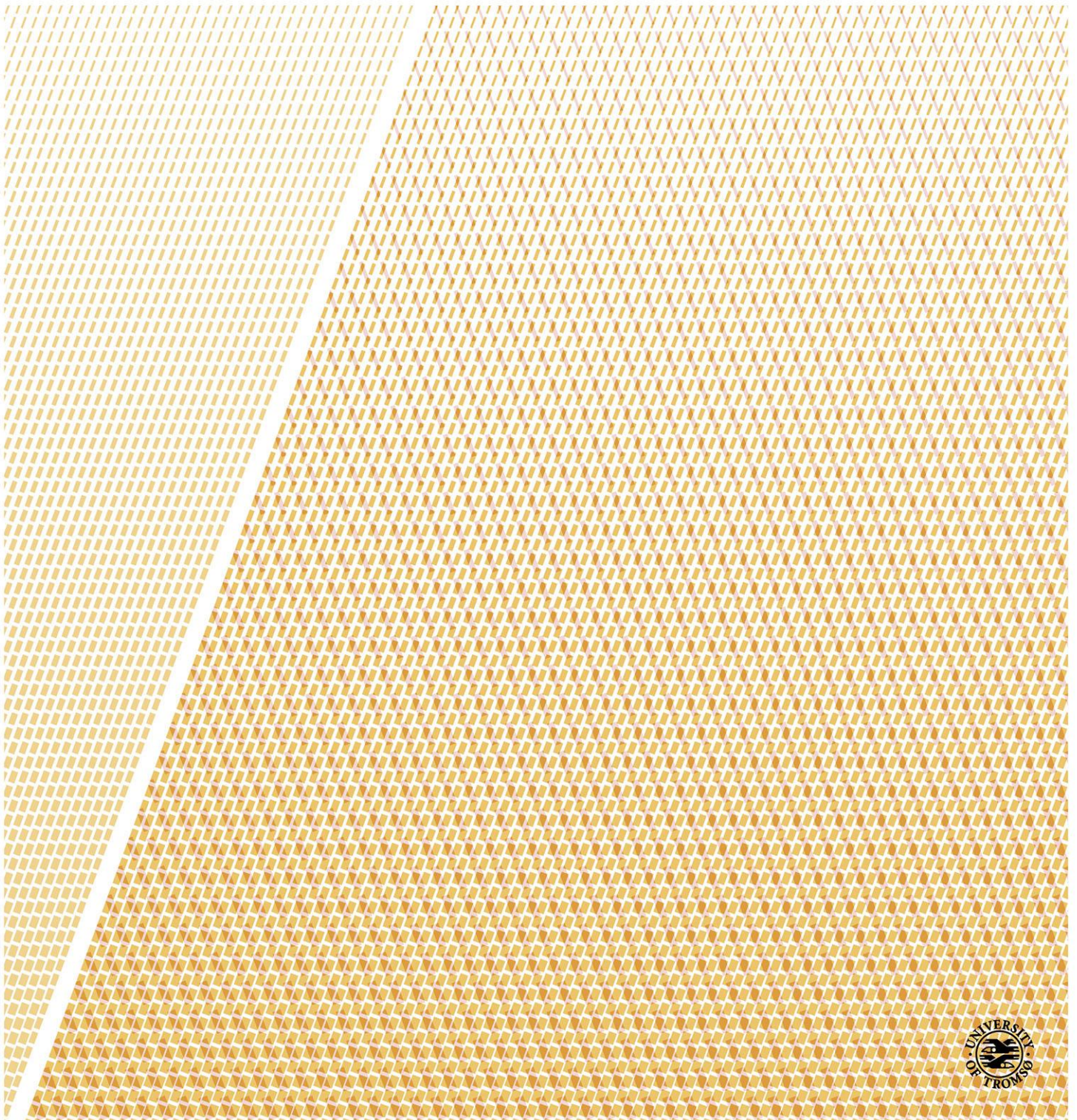


# **Comparisons of sickness absence patterns, trends and attitudes in the health and care sectors in two municipalities in Norway and Denmark.**

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**Line Krane**

*A dissertation for the degree of Philosophiae Doctor, October 2015*





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## SUMMARY

Sickness absence is of great concern in most Western societies and has huge economic and social consequences. The Scandinavian countries, especially Norway, have high sickness absence rates. In both Norway and Denmark, the highest sickness absence rates are found in the health and care sector. The aims of this doctoral thesis are to compare the sickness absence patterns of municipal employees in the health and care sector in two comparable countries, Norway and Denmark, and to explore attitudes towards sickness absence and sickness presenteeism in nursing homes in Norway and Denmark. The thesis consists of three papers. Papers I and II are based on data from the personnel registers of the municipalities of Kristiansand, Norway and Aarhus, Denmark. These registers contain information on sickness absence for employees in the health and care sector. Paper III is based on data from focus group discussions among nursing homes employees in the same two municipalities.

Paper I compares sickness absence patterns, measured as rate and number of sick leave episodes, between employees in the health and care sector of the municipality of Kristiansand, Norway and Aarhus, Denmark. We found higher sickness absence rates in Norway compared to Denmark, and employees in Denmark had more frequent, but shorter sick leave episodes compared to Norway. This may indicate that more frequent sick leave episodes prevent higher sick leave rates.

In Paper II we investigated sickness absence patterns and time trends of municipal employees in the health and care sector in Kristiansand, Norway and Aarhus, Denmark. We found an overall increase in the sickness absence rate in Denmark, while the largest overall increase in number of sick leave episodes was found in Norway. The largest increase in sickness absence rates and number of sick leave episodes were observed among young employees in both countries. The results indicate that sickness absence, measured as rate and number of sick leave episodes, converged in the two countries between 2004 and 2008.

In Paper III we explored attitudes towards sickness absence and sickness presenteeism among municipal employees in nursing homes in Kristiansand, Norway and Aarhus, Denmark. We found that attitudes towards sickness absence and presenteeism were socially and

morally determined at the individual level by an overall perception of work, independent of country.

The results from these studies indicated that the overall sickness absence rates in Denmark increased between 2004 and 2008, whereas they were stable in Norway. Sickness absence patterns, measured as rate and number of sick leave episodes, converged during the study period and the sickness absence rates in young employees increased significantly in both countries. Attitudes towards sickness absence and sickness presenteeism seemed similar, independent of country.

## LIST OF PAPERS

This thesis is based on the following three papers:

### Paper I

Krane L, Fleten N, Stapelfeldt CM, Nielsen CV, Jensen C, Johnsen R, Braaten T. **Comparison of sick leave patterns between Norway and Denmark in the health and care sector: A register study.** *Scand J Public Health* 2013; 41:684-691

### Paper II

Krane L, Johnsen R, Fleten N, Nielsen CV, Stapelfeldt CM, Jensen C, Braaten T. **Sickness absence patterns and trends in the health care sector: 5-year monitoring of female municipal employees in the health and care sectors in Norway and Denmark.** *Hum Resour Health* 2014; 12:37

### Paper III

Krane L, Larsen EL, Nielsen CV, Stapelfeldt CM, Johnsen R, Risør MB. **Attitudes towards sickness absence and sickness presenteeism in health and care sectors in Norway and Denmark: a qualitative study.** *BMC Public Health* 2014; 14:880

## ABBREVIATIONS

CI	Confidence interval
IRR	Incidence rate ratios
FGD	Focus group discussions
STATA Se 12	Statistical package for quantitative data
QSR NVivo 9	Statistical package for qualitative data
LFS	Labour Force Surveys
EU/EEA	European Union/ European Economic Area
OECD	Organization for Economic Co-operation and Development
AFP	Early retirement pension (Norway)
AMS	Arbejdsmarked og Rekruttering
NAV	Norwegian Labour and Welfare Administration/Arbeids- og velferdsetaten
EWCO	European Working Conditions Observatory
KS	Kommunesektorens interesse- og arbeidsgiverorganisasjon/The municipal sectors interest and employers' organization

## 1. INTRODUCTION

### 1.1 Background: why study sickness absence?

Sickness absence has become a growing public health challenge in Western societies during the last decades (1-3). The societal, economical, and psychological burden of sickness absence and sickness presenteeism (i.e. showing up to work ill) is considerable. Sickness absence and sickness presenteeism interferes with people's everyday life, due to their own sickness absence, or that of a colleague or family member. There are large differences in sickness absence rates between Norway and Denmark, with the highest absence rate in Norway. Regardless of the level of sickness absence, authorities in both countries want to reduce the rates of sickness absence and the number of disability pensions (4), which was the starting point of this doctoral thesis. The objectives in this thesis were achieved by the use of two methodological approaches: the quantitative and the qualitative approach. The main objective was to compare sickness absence (quantitative studies on trends, level, and patterns of sickness absence) among employees in the health and care sector in Norway and Denmark, two countries with large differences in sickness absence rates but comparable welfare systems, in order to gain new knowledge about the phenomenon of sickness absence. In addition, a qualitative study on attitudes towards sickness absence and sickness presenteeism was performed in these countries to explore and give insight into attitudes towards and experiences of these same phenomena.

Sickness absence can be understood and explained at different theoretical levels: the structural level, the organisational level, and the individual level (4;5). The different social benefits and other regulations surrounding sickness absence at the state level represent the structural level, workplaces are at the organisational level, and the individual level is represented by the perceptions and reactions of each individual to sickness absence.

In the following part of the introduction to this thesis, we will present a discussion of factors affecting sickness absence and sickness presenteeism at all three levels. These levels and the factors affecting sickness absence will be compared with sickness absence levels, patterns,

and attitudes in Norway and Denmark. We will present factors that explain variations in sickness absence between groups (e.g. age, gender, and education/occupation) and factors affecting sickness absence level (e.g. sick leave legislation, unemployment, and psychosocial work environment).

## **1.2 Definitions and measures of sickness absence**

An internationally accepted definition of sickness absence is “the manifestation of a decision by an employee not to present themselves at their place of work at a time when it is planned by management that they should be in attendance” (6). The Ministry of Health and Care Services in Norway (4) defines sickness absence as both a result of health problems and how each individual relates to health problems. The majority of sickness absence is generally attributed to sickness or incapacity, but there may be other reasons (6;7). Whitaker (7) points out that the decision to resume work after sickness absence is related to real and perceived job conditions both psychosocial and physical, expected job demands, managements behaviour, social norms at work and in the community, information from medical staff and economic pressures caused through loss of earnings (for the individual) and loss of productivity (for the organisation). There are other individual causes as well such as sickness absence behaviour, a person’s health beliefs, and motivation to attend and job satisfaction (7). As stated by Eurofond (6), it is important to consider the pressures that lead to sickness absence or attendance, to discover what level of illness justifies absence to an employee, whether this view is shared by the employer, and what motivation or pressure employers use to encourage attendance. In the context of a recession, for example, the fear of losing one’s job may reduce sickness absence.

These definitions are only a starting point, since national sickness absence data use many different definitions. The extent of sickness absence is difficult to assess, and thus one objective of this thesis is to identify and measure sickness absence as similarly as possible in both Norway and Denmark in order to make reliable comparisons.

There are several ways of measuring sickness absence, but there are a lack of standardised methods for doing so (8;9). In a comparative study on sickness absence in Europe, Bergendorff (10) claims that it is important to encourage efforts to develop common and comparable indicators of sickness absence (10). These indicators should reflect both the occurrence and the duration of sickness absence (10). National definitions vary in terms of the forms of sickness absence considered, the criteria for inclusion and exclusion, differences in the populations being compared, and the accuracy of the sickness absence data collected (7;9). For example, in Norway absence to care for family members is not included in the definition of sickness absence, while in other countries it is included. In Denmark, absence due to pregnancy is excluded, while in Norway this is not the case. There may also be differences in definitions within a country; e.g. public definitions may be different from those of private firms.

Sickness absence statistics are generally derived from one of two sources: health insurance statistics and surveys of employers or individuals. The former are comprehensive, but cover only the insured population and only absence caused by sickness. In principle, surveys include all forms of absenteeism, but they depend on estimates that may be unreliable.

Attitudes towards sickness absence have been investigated in some quantitative studies such as Holmaas (11) who studied attitudes towards sickness absence in the Nordic countries. They found that women are more restrictive than men and that restriction increases with age and working hours. They also found differences between the countries; Island was the most restrictive and Sweden was the least; Denmark and Norway were in the middle (11). However, there are few qualitative studies on attitudes towards sickness absence and sickness presenteeism. A qualitative study on sickness absence, social relations, and self-esteem found that support by family members and feeling needed at work were important for the absentees' self-esteem and should be take into account when discussing rehabilitation efforts (12). Doing a qualitative study on sickness absence and sickness presenteeism would give us the opportunity to investigate how employees think about these phenomena and why they think and act as they do.

### **1.2.1 Work disability theories**

Work disability, e.g. work incapacity, is a major challenge all over Europe, and until the recent economic recession in 2008, there was a much higher prevalence of disability pension than unemployment across the countries included in the Organisation for Economic Co-operation and Development (OECD) (13). A substantial part of the workforce in the Nordic countries receives a disability pension, and in Norway this proportion is growing (14). With the changing demographics and an ageing population, in the near future it will be a challenge for European countries to keep employees healthy and to have them participate longer in the labour market. It is also worrying that a large number of young people remain outside the labour market, as they might instead be included in other welfare schemes. This problem is worse in other European countries like Italy and Spain, but is also alarming in the Scandinavian countries (2;15-17). Stover (18) claimed in a study concerning work related factors and disability pensions that ill health and disease may cause sickness absence and are recognised as risk factors for disability pensions (18). Moreover, sickness absence might be the start of a process towards a disability pension. Therefore, sickness absence and disability pensions should be considered in relation to each other. The increasing number of people receiving disability pensions is an important issue for policy makers. It represents an economic challenge for society, contributes to a widening of socioeconomic inequalities in the population (19), and leads to social and economic decline at the individual level.

### **1.3 Development of working life and welfare benefits in Europe, Norway, and Denmark at a glance**

The modern European welfare states were developed through the introduction and evolution of social insurance systems and the growth and structural change of public social expenditures (20). There are different dimensions of a welfare state such as security/insecurity, inequality/equality, "social" security and regulation of markets and industrial relations (20;21). Esping-Andersen distinguish three major types of welfare states; liberal welfare states (i.e. USA/Canada), conservative/corporative welfares states (i.e. France/Germany) and social-democratic welfare states and The Nordic countries are



classified as the last one. The Nordic welfare model basic values is that all citizens have equal opportunities, rights and obligations to participate in society and use their resources – regardless economic and social background (22). The particularity of the Nordic model is that these values have been translated into political decisions and then in practice, such as educational systems, health and elderly care, and insurance by loss of employment and health (22).

According to Esping-Andersen (23), we need a new welfare state and needs to consider four main issues: the nature of employment has changed – the social challenge is creating gender equality, more active labour market policies tailored to individual needs, the welfare state should also cover new social needs such as single parenthood or lack of skills causing long-term unemployment and the welfare state should be more active and preventive (23). Special challenges in the Nordic welfare states are the ageing population and relatively low birth rates (24).

Most European countries have a comprehensive welfare benefit system, though there are differences. Typically, sickness and disability insurance are organised either as collective arrangements by the workplace or as social insurance, thus reducing adverse selection problems (25). As these arrangements have improved income security in the developed world, the last 30-40 years have seen an increase in sickness and disability insurance rates (25). The Scandinavian countries have traditionally had more generous welfare schemes than other European countries, and although from a European point of view Norway and Denmark may seem similar, there are differences.

A comparison of sickness benefit policies and sickness absence patterns might lead to a better understanding of the underlying causes of sickness absence. In studies on the distribution of sickness absence in the European countries, Gimeno (1;9) argues that international comparisons are needed to enable overall patterns observed across countries, thereby indicating which policies are working from both a public health and economic point of view (1;9). Another study by Barmby (26) showed that international comparisons of sickness absence are possible by the use of data derived from the LFS (26). The between-country variation in the data enables us to identify and highlight the importance of

institutional and societal differences and to draw attention to related policy issues as Livanos (27) claims in a Pan-European study on sickness absence (27). Few studies have been published on sickness absence patterns among employees in the health and care sector in Norway and Denmark. The main findings in previous studies have been the differences between age-groups (27;28). We have not found any international data that could enable comparisons of sickness absence patterns across countries in the health and care sector.

The homogeneity of a country sample with regard to institutional framework provides a more convincing basis on which to make meaningful comparisons and assessments regarding the importance of the macroeconomic environment and the institutional arrangements on sickness absence (27). Therefore, we investigated variations in sickness absence rates and number of sick leave episodes in a single sector, the health and care sector, and between two comparable countries, Norway and Denmark. Another important part of this thesis is the investigation of attitudes towards sickness absence and sickness presenteeism in the two comparable countries. Higher sickness absence rates have many different causes, and in light of this, a study of how attitudes between different nursing homes in different locations in the two countries differ and determine sickness absence would be relevant.

### ***1.3.1 Sickness benefit legislation***

In order to receive sickness benefits, legislation in Norway requires that the employee be unable to work due to disease or injury. This must be verified by a medical doctor if the sick leave extends 3 or 8 days, depending on the company. In Kristiansand, Norway inability to work must be verified by a medical doctor if sickness absence lasts 8 days (29). A project was started in 2002 that allowed employees to "self-sick list" for up to 50 days without medical verification, but hardly anyone utilised the opportunity (28;30). Nevertheless, this possibility made the regulations regarding sickness absence in Kristiansand, Norway more similar to those in Denmark, where there is no obligation to provide medical certificate; this is only done if the employer or municipality requires it. Due to the self-sick listed project in Kristiansand, the communities are comparable at the system level.

The municipality manages social security expenditures in Denmark, while in Norway the national government is responsible for this. The compensation level is 100% in both countries, but the weekly maximum disbursement is higher in Norway than in Denmark (5;31;32). However, all government employees in Denmark receive full pay during sick leave and therefore have no more economic incentive to reduce sickness absence than exists in Norway.

Eligibility for sickness benefits in Norway depends on if a person is partly or fully unable to work. An employee must be employed for a minimum of 8 weeks to have the right to submit self-certification for sick leave. A follow-up assessment must be performed within 8 weeks based on information from the sick-listed employee, the employer and the general practitioner (5).

Eligibility in Denmark depends on if a person is partly or fully unable to work, has been employed 8 weeks and worked 74 hours (employer), or employed 13 weeks and worked 120 hours (municipality). Follow-up assessment must be performed within 8 weeks based on information from the sick-listed employee, the employer, and the general practitioner (5). After the 8-week assessment, an additional assessment is performed every 8<sup>th</sup> week for “uncomplicated cases” and every 4<sup>th</sup> week for “risk cases”. A follow-up plan must be in place at the time of the second assessment. In July 2005, the 8-week assessment became mandatory and preference was given to more focused follow-up to return-to-work strategies. The assessments are performed by a municipal case manager (33).

Sickness absence is unevenly distributed in the active workforce of both Norway and Denmark; 10% to 20% of the population accounts for 80% of absences (34;35). However, Brage (36) found this group is not constant; there is a high turnover from year to year of who is included in this group (36). The sick leave regulations in Norway and Denmark share common features other than the 100% compensation rate: there are no quarantine periods, and compensation is financed by the employer during the first 16 days of sick leave in Norway and for the first 14 days, extended to 21 days in 2008 (extended to 30 days in 2012), in Denmark (5;33). After the employer compensation period expires, compensation is fully or partly paid by public authorities (31;37). The maximum duration of compensation while on sick leave is 1 year in both Norway and Denmark. Extension is possible in Denmark if the

relevant authorities or physician require on-going evaluations of work capacity; the employee is awaiting medical treatment, has a work injury claim in progress, or has a deadly disease (5).

### **1.3.2 *Employment protection policies***

Regulations concerning employment protection policies and job security are different in Norway and Denmark (32;38;39), as employees in Denmark might lose their job while on sick leave. This hardly ever occurs in Norway. One report by Becker (40) studying the Scandinavian model shows that level of employment protection is 1.8 in Denmark and 2.6 in Norway (scale of 1-6, the higher the value, the stricter the protection) (40). Strong employment protection policies can contribute to increased sickness absence is showed in a report about work absence in Europe by Bonato (41). Neither The Danish Agency for Labour Market and Recruitment/Styrelsen for Arbejdsmarked og Rekruttering (AMS) nor the Danish Labor Organization have an overview of how many people are dismissed during sickness absence, but the impression the AMS has from internal analysis is that there are few people still employed when duration of sickness benefits approaches 1 year (5). An OECD publication from 2008 pointed out that in Denmark, race, religion, etc. are not valid reasons for employment termination, but illness is not mentioned. However, in the section on Norway the publication states specifically that disease is not valid grounds for employment termination (42). Danish employers may terminate employees with 1 months' notice if the employee has been ill for more than 120 days during a 12-month period.

### **1.3.3 *Health/sickness and work capacity***

Sickness absence means that an employee is absent from work due to illness (6;9). In principle, either because the work capacity is so reduced that it is not possible to work and/or the work may aggravate the disease. The relationship between health/illness, work capacity and sick leave should be central to understanding the key forces behind sickness absence (5). Developments in health conditions improve and life expectancy in OECD countries is rising, but so is burden of disease (43). The population is ageing and life expectancy at birth in 1970

and 2011 were in Denmark, respectively 73 years and 79.9. In Norway the corresponding numbers were 74 years and 81.4 (44;45).

The concept of disease, as it is understood in connection with sickness absence, differs substantially between professionals (doctors, NAV, AMS) and employees. Solli (46;47) discuss capability based health and disease concepts. One health and disease concept is based on a value-neutral and scientific concept, and is often used by professionals. Another is based on a value-laden and relational concept, and is often referred to by employees (46;47). This variation in the perception of the concept of disease may cause conflicts when professionals, employees, and the Social Security structure meet. However, the different concepts may contribute to a better understanding of how disease justifies sickness absence at the individual and the organisational level. In addition to this, concepts of disease may be supplemented with a concept of illness, i.e. in this context the social and personal aspects of understanding sickness absence at the workplace. In a study about moral evaluation of ill employees at work places, Dodier (48) claims that a person's understanding of illness can be used as a pretext to justify moral measures that are related to other aspects of his or her life at the workplace and also points to the pervasive means of social control that lie outside medical institutions (48). In a study concerning attitudes and beliefs of employees in the public sector about common health problems and work, Buck (49) found that perception of others were important in influencing sickness absence and sickness presenteeism. "The employees [...] widely acknowledged that health problems would impact on work in a variety of ways, including performance, colleagues work, and inter-personal relationship in the workplace" and the study stated there was a high degree of consensus on these issues (49). Barnes (50) found in a study about common health problems and work, that moral pressure and the associated concept of legitimate illness and its impact on work were major themes in the discussion of common health problems and work. The study concludes that the role of social factors and cultural norms in lay constructions of health and work needs to be recognized (50).

#### **1.3.4 Composition of the workforce**

Participation in the workforce is high in Norway and Denmark compared to other countries, especially among women and the elderly (2;40;51). In Norway, the total employment rate in 2005 was 75.2%, while it was 75.5% in Denmark. For women, the employment rate was 72.0% in Norway and 70.8% in Denmark. The corresponding numbers for total employment in France and Germany were 62.3% and 65.5%, respectively and 56.9% and 59.8% for women (40).

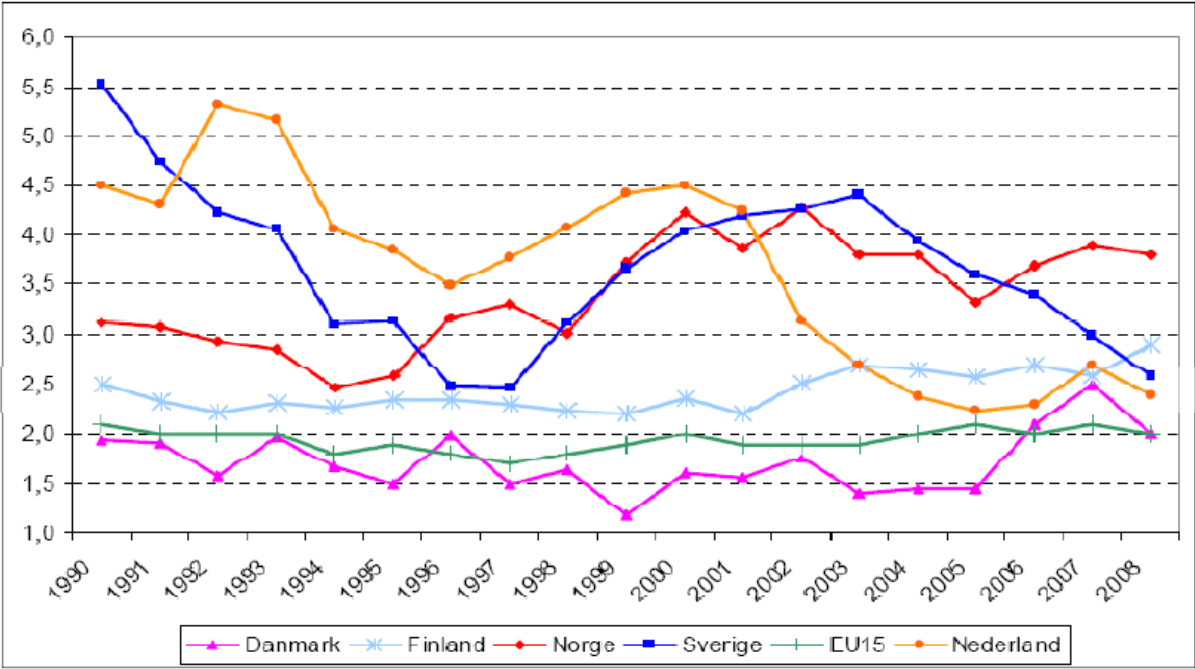
However, the composition of the workforce is changing in both Norway and Denmark. The proportion of young employees in the workforce is decreasing while the proportion of elderly employees is increasing, and this count for both countries.

Previously, the proportion of young employees was higher than that of older employees in both countries. Now the percentage of employees aged 50 years or older is increasing in Denmark and Norway (44;45). In Denmark those aged 50 years or older accounted for 38 % of the working force in 2009, compared to the OECD average of 34.5%, while in Norway the age composition is close to the average of the OECD (44;45).

#### **1.4 Development of sick leave patterns in Europe, and Norway and Denmark in particular.**

Length and number of sickness absences have long been studied. Starting in the 1950s, an increase in sickness absence rates was observed in several Western societies (52). Using measures of severity (average days lost or proportion of persons away at one time) and frequency (average episodes of absence per person), Taylor (52) found that frequency rose more than sickness absence rates, indicating a shortening of the average length of sickness absence. Sickness absence represents a major concern in most Western societies, and Norway and Denmark are no exception (37;53;54). In most European countries, there is paid sick leave; however the income replacement rate varies from small sums up to 100% of wages, and wait times and differences for short-term and long-term sickness may apply (55).

**Figure 1. Sickness absence rates in percent in Norway, Denmark, Finland, Sweden, the Netherlands, and the EU15, 1990-2008.**



Source: Labour Force Survey. Eurostat. EU15=the average of the 15 European countries.

Several studies have reported a correlation between sickness absence rates and welfare benefits (56-58). Barmby (59) found that the higher the rate of compensation, the longer the sickness absence was likely to be. Another study found that in generous welfare states there was a higher risk of an employee staying at home too long when ill, since the incentive to come back to work was quite weak (56;57). This can lead to long sickness absences, such as those observed in Norway. In less generous welfare states, it is costly to stay at home when ill. When this cost is sufficiently high, and increases as the sickness absence lengthens, employees may return to work too early. For these employees there is a risk of becoming ill again, since they may not have completely recovered. This leads to short, but frequent, sickness absences. If the welfare arrangements in a country are between these two extremes, employees tend to choose to stay at home when ill, but prefer to work when they are well, leading to low sickness absence rates (56;57). A report from the municipality of Kristiansand, Norway supported that when employees may decide themselves when they are able to go to work and do not require medical verification, the sickness absence pattern for short-term absence changed (28;30;60). The short-term absence increased, while the long-term absence decreased (28).

LFS indicate that sickness absence in Norway is about twice that in Denmark and twice that of the mean reported by the OECD (1-3). Expenditure on paid sick leave varies drastically across countries. The average expenditure in the 27 European countries was 197 EUR per capita in 2005, with Norway spending 940 EUR per capita and Denmark 265 EUR per capita (55). The economic burden of sickness absence is considerable, and authorities in both countries want to reduce these costs. However, expenditure on sickness absence has to be assessed in the context of the cost of sickness presenteeism (i.e. showing up to work ill). Sickness presenteeism results in costs related to increased risk of work accidents, development of chronic diseases and thus inability to work, and health impacts on co-workers (55). These expenditures should also be assessed in the context of the cost of unemployment benefits and disabled benefits. Unfortunately, we have not been able to find any comparable information on this.

From a historical perspective, it is debatable how strong the increase in overall sickness absence and disability pension has been in Norway (4). The level of self-certified sickness absence has been stable since the 1970s, while the level of doctor-certified sickness absence has varied over time; in 2003 it was at the same level as in the 1970s (53).

According to a European comparative analysis of health policy performance in Europe, Norway performed among top three, while Denmark performed significantly worse than its neighbours (61). The life expectancy for women is 83 years in Norway, while it is 81 years in Denmark. For men the life expectancy is 79 years in Norway, while it is 77 years in Denmark (62). This indicates that the difference in sickness absence rates in Norway compared with Denmark is not due to health, health care services, or morbidity.

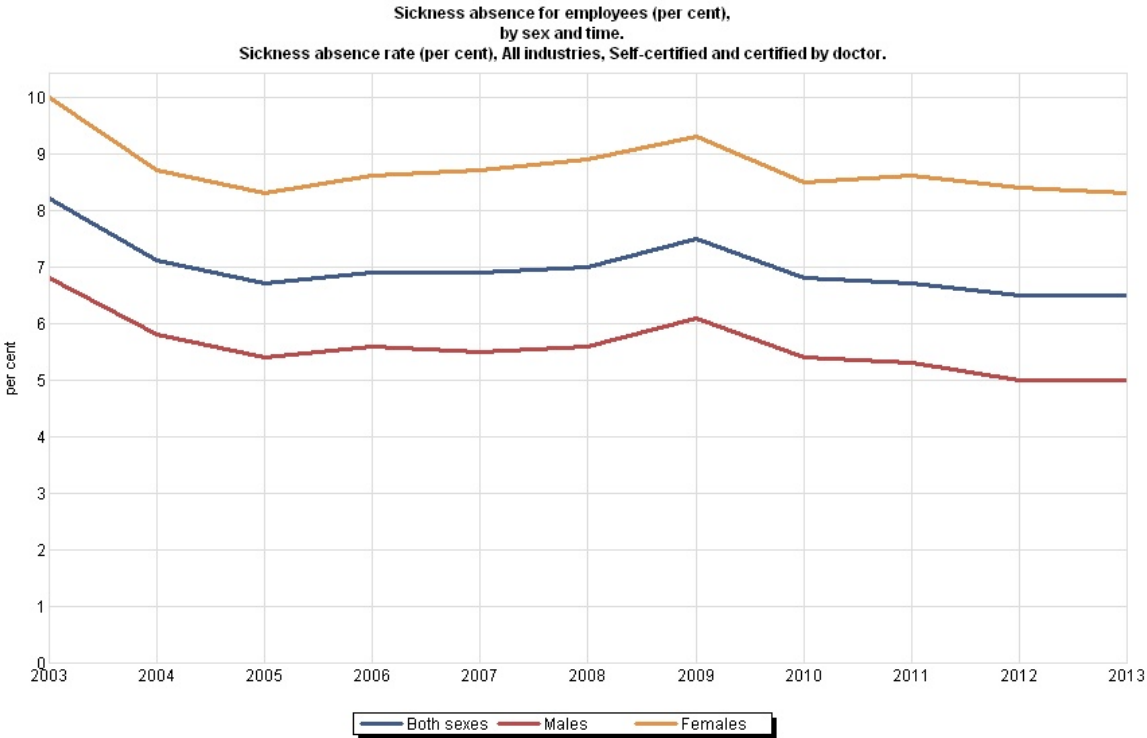
The health and care sector has among the highest sickness absence rates in both Norway and Denmark (4;63;64). The burden on society and individuals is substantial, but it is more difficult to quantify.



**1.4.1 Levels of sickness absence in Norway and Denmark**

Sickness absence rates have been higher in Norway compared to Denmark since at least 1987, when the first comparable statistics were recorded (32;62;65;66). The trend in sickness absence for both women and men from 1987 to 2008 showed a relatively large variation in sickness absence rates in Norway (from approximately 2.5% to 4%) compared with Denmark, which had far more stable sickness absence rates (from approximately 1.6% to 1.8%) during the same period (62;66;67) . These numbers are from the LFS and indicate the level of sickness absence (26;66). However, during the last 5 years, the sickness absence rate has shown a slight decrease in Norway in all age-groups and an increase in Denmark in all age-groups (68;69).

**Figure 2. Sickness absence rate (%) in Norway by sex and year, 2003-2013.**



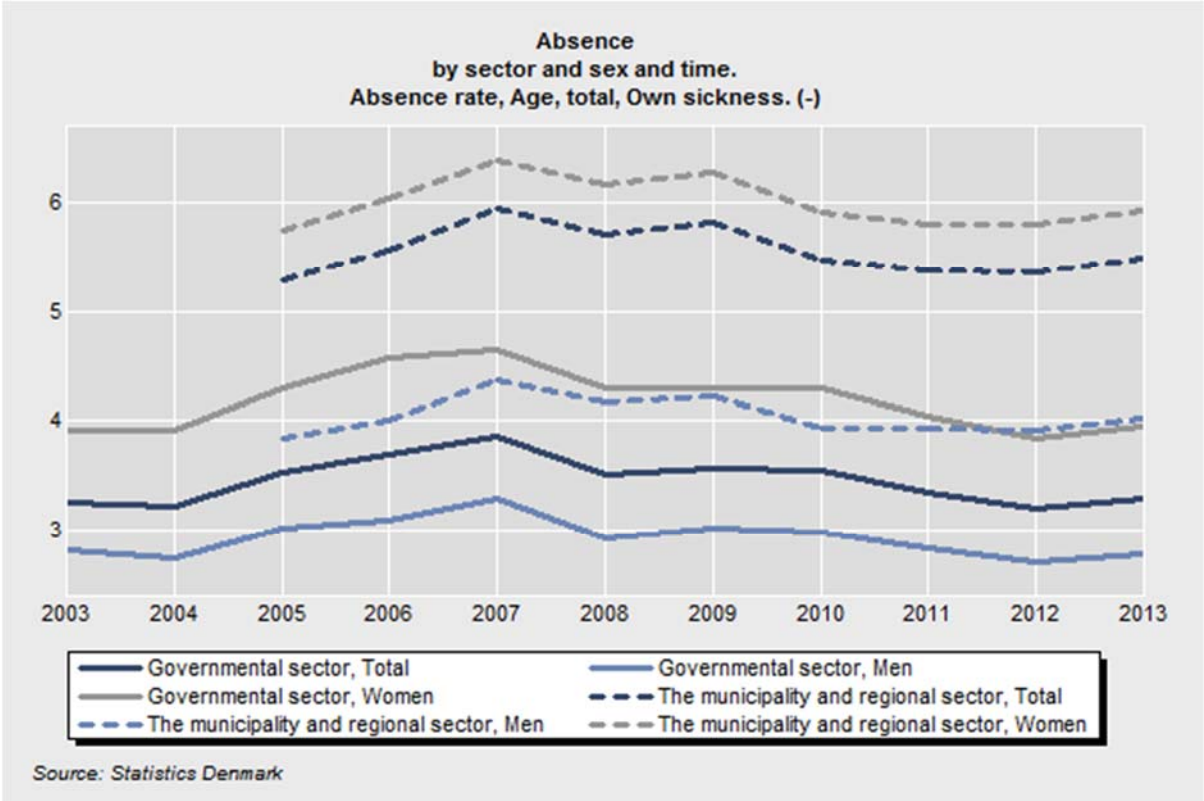
Source: Statistics Norway

Source: Statistics Norway.

Figure 2 shows the trend in sickness absence in public sector in Norway, self- and doctor-certified sick leave including women and men from 2003 until 2013. The figure shows that

sickness absence in Norway decreased from 2003 until 2005, then it increased slightly until 2009 and has later decreased until 2013.

Figure 3. Sickness absence rate (%) in Denmark by sex and year, 2003-2013.



Source: Statistics Denmark.

Figure 3 shows the trend in sickness absence in governmental, municipality and regional sector, own sickness absence including women and men from 2003 until 2013 in Denmark. The figure shows higher sickness absence in municipality and regional sector compared to governmental sector. Sickness absence in Denmark, in all sectors, increased from 2004 until 2007, followed by a decreased until 2008. In governmental sector sickness absence was stable from 2008 until 2010, then it decreased until 2012 followed by a small increase from 2012 until 2013. In municipality and regional sector sickness absence had a small increased from 2008 until 2009, then it was slightly decreasing until 2012 followed by a small increase from 2012.

In Norway, overall national sickness absence rates decreased slightly following a long period of growth, from 7.1% in 2004 to 7.0% in 2008 (64). In recent years, the sickness absence rate has continued to decrease; in 2013 it was 6.5%. The sickness absence rate in Denmark rose from 5.3% in 2005 to 5.7% in 2008 (63). It rose again to 5.8% in 2009, but decreased to 5.3% in 2012 (63).

There are some challenges in comparing data from two different countries. Data from Denmark provide separate information on sickness absence for employees in governmental, municipality and regional sectors, municipal sector and private sector. Data from Norway includes sickness absence information from all public sectors and is based on data from the Norwegian employers and employee register (Aa-register). We compare data from the municipality and regional sector in Denmark and public sector in Norway in respectively figure 2 and 3, due to the fact that much of health and sector in Denmark is administrated by the municipalities and regions. The time trend gives us the opportunity to compare the development in sickness absence over years both within each country and between the countries. The time trends in figure 2 and 3 shows that sickness absence in Norway are higher than in Denmark in general and over years, as well as for women and men, respectively. As to length of absence NOSOSCO (33) reports that long-term sickness absence is high in Norway and low in Denmark, while the short-term sickness absence is almost opposite. Norway has the lowest rate of short-term sickness absence while Denmark has the highest.

Partial sick leave has increased in both Norway and Denmark since the beginning of this century, mostly among women (70). Compared with complete sick leave, partial sick leave is assumed to have positive effects on health and well-being, and it is believed to facilitate the return to full-time work (70). However, scientific evidence on the effects of sick leave in general is still scarce (71).

**Table 1 Sickness absence rates in Norway and Denmark from 2004-2014 in general and in municipality sector, and in health and care sectors, respectively. Numbers derived from Statistics Denmark, Statistics Norway and KS (Norway).**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Norway											
Mean SA rate in general <sup>1</sup>	7.1	6.7	6.9	6.9	7.0	7.5	6.8	6.7	6.5	6.5	6.4
Female/male	8.7/5.8	8.3/5.4	8.6/5.6	8.7/5.5	8.9/5.6	9.3/6.1	8.5/5.4	8.6/5.3	8.4/5.0	8.3/5.0	8.2/4.9
Mean SA rate in health and care sector <sup>1</sup>	9.5	9.1	9.5	9.5	9.6	10.0	9.3	9.4	9.2	9.2	9.1
Female/male	10.2/6.8	9.7/6.4	10.1/6.6	10.2/6.5	10.3/6.5	10.7/6.9	10.0/6.4	10.1/6.4	9.9/6.1	9.9/6.2	9.9/5.9
Mean SA rate in municipality sector <sup>2</sup>	9.3	8.8	9.4	9.6	9.8	9.9	9.3	9.7	9.8	9.8	9.8
Mean SA rate for health and care sector in municipality sector <sup>2</sup>	10.9	10.2	11.0	11.1	11.4	11.4	10.6	11.0	11.2	11.2	11.2
Mean SA rate in health and care sector in Kristiansand municipality <sup>2</sup>		11.0	10.7		12.4	11.7	10.9	10.7	11.5	11.0	11.0
Mean SA rate from our study	11.9	10.4	10.4	11.6	11.6						
Denmark											
Mean SA rate in general <sup>3</sup>	3.2	3.5	3.7	3.9	3.5	3.6	3.6	3.4	3.2	3.3	
Female/male	3.9/2.8	4.3/3.0	4.6/3.1	4.7/3.3	4.3/2.9	4.3/3.0	4.3/3.0	4.1/2.8	3.9/2.7	4.0/2.8	
Mean SA rate in municipality sector <sup>3</sup>							5.4	5.4	5.4	5.6	
Female/male							5.9/3.9	5.8/3.9	5.8/4.0	6.0/4.1	
Mean SA rate in health and care sector <sup>4</sup>				4.7	5.3	4.5	4.4	5.8	4.7	5.0	
Female/male				5.0/4.2	5.0/5.9	4.3/4.9	4.6/4.0	6.4/5.1	5.4/3.7	5.1/4.8	
Mean SA rate for health and care sector in municipality sector <sup>5</sup>							7.2	6.8	6.8	6.8	
Female/male							7.3/5.3	7.0/5.2	7.0/5.1	7.0/5.4	
Mean SA rate in health and care sector in Aarhus municipality <sup>5</sup>							7.8	7.5	7.8	6.6	
Female/male							8.0/5.3	7.7/5.7	7.9/6.7	6.6/6.6	
Mean SA rate from our study	7.1	7.1	8.3	8.8	8.4						

1: Sickness absence for employees, by sex, industry (SIC2007) and type of sickness absence (percent) (closed series). Statistics Norway: 07869. Years: 2004-2014. 2015.

2: Numbers from KS (Kommunesektorens interesse- og arbeidsgiverorganisasjon/The municipal sectors interest and employers' organization). Years: 2004-2014. 2015.

3: Absence by sector, sex, cause of absence, age and indicator of absence. Statistics Denmark: FRA05. Governmental sector. Years: 2004-2013. 2015.

4: Absence by sector, sex, cause of absence, industry (db07) and indicator of absence. Statistics Denmark: FRA033. Governmental sector. Years: 2007-2013. 2015.

5: Absence in the municipality sector by region, sex, cause of absence, occupation and indicator of absence. Statistic Denmark: FRA12. Years: 2010-2013. 2015.

Table 1 shows that the time trend in sickness absence in general is approximately twice as high Norway as in Denmark, and that counts for health and care sector as well.

Sickness absence rate in health and care sector in the municipality sector in general in Norway varied from 10.9% in 2004 until 11.2% in 2014, with the lowest level in 2005 at 10.2% and the highest level in 2008 and 2009 at 11.4%. In health and care sector in Kristiansand municipality the sickness absence rate varied from the lowest rate in 2006 at 10.7% until the highest rate in 2008 at 12.4%.

Sickness absence rate in the health and care sector in the municipality sector in Denmark varied from 7.2% in 2010 until 6.8% in 2013. In the health and care sector in Aarhus municipality sickness absence rate varied from 7.8% in 2010 to 6.6% in 2013, with the highest rates in 2010 and 2012 at 7.8% and the lowest rate in 2013 at 6.6%. The ratio between sickness absence in the health care sector in the municipal sector and the absence level in general was generally slightly higher in Denmark than in Norway, respectively 2.0 and 1.6, and in Aarhus municipality and Kristiansand municipality as well, respectively 2.2 and 1.6 in 2011. Reasons for this may be that Danish municipalities bear the costs for sick leave to a greater extent than in Norway, where the employers' period is 16 days while in Denmark it was 14 days, extended to 21 days in 2008.

Sickness absence for women compared to men, in general and in the health and care sector, is higher in Norway compared to Denmark. It seems that Danish men have 70% of women's absence, while Norwegian men have 60% of women's absence. In Norway, national sickness absence rates for female employees in the health and care sector have been stable (10.2% in 2004; 10.3% in 2008) (64). In Denmark, national sickness absence rates for all female employees increased from 3.9% in 2004 to 4.3% in 2008, and this increase was especially strong in young employees (63).

The figures available in sickness absence statistics in Denmark and Norway are to some extent different as described previously. The statistics show to some degree an overview of different years, it is not necessarily given sickness absence figures for men and women at the municipal level (Norway), the inclusion criteria in health and care sector might be slightly different in Norway and in Denmark and division into regions and national figures are slightly different. The study population in our study and in the health and care sector in Aarhus municipality and in Kristiansand municipality is the same respectively. However, there might be some differences in the inclusion of the study population such as length of employment; in our study we included only employees employed the whole year. The statistics were derived from various sources: Statistics Denmark, Statistics Norway and KS (Kommunesektorens interesse- og arbeidsgiverorganisasjon/The municipal sectors interest and employers' organization).

#### **1.4.2 Basis for comparisons of sickness absence numbers**

Labour Force Surveys (LFS) are conducted in all European Union/European Economic Area (EU/EEA) countries and are often used in international comparisons of sickness absence (66). Sickness absence is measured in the LFS by using the same question in all countries and it is therefore possible to compare the answers to this sickness absence question across countries (33), keeping differences in sickness legislation in mind.

Surveys of this kind, the LFS, are usually carried out over a particular period and only absences during that time are counted. Longer periods of absence may be missed or under-recorded.

Another survey, the fifth European Working Condition Survey (33) included a question regarding the number of sickness absence days within the last year. In the LFS, Denmark had considerably lower sickness absence than Sweden, but in the Fifth European Working Condition Survey, Denmark and Sweden had approximately the same rate of sickness absence. Norway had high sickness absence rates in both surveys. These comparisons illustrate how the results may be considerably different when the surveys use different measurement methods (33).

For example, in Denmark, national data are based on surveys in different sectors (governmental, municipality and regional sector, municipality and private sector), while in Norway data are based on surveys of establishments and sick pay records (6). These differences and differences in institutional arrangements at the structural level, such as the sick pay schemes and employment protection policies need to be taken carefully into account when making comparisons.

In the Nordic countries there are many registers and sickness absence could have been compared by the means of the registers. However, there has not been comparable registers regarding sickness absence in the Nordic countries so far. The registers have primarily been based on data of different types of sickness absence benefits, and since rules and regulations differs in the countries, the registers have been difficult to compare (33).

In Norway the employment protection is strong and it is difficult to fire a sick listed employee. However, in Denmark, this is easier where many employment contracts include a paragraph about the "120 days" rule, i.e. if the employee is more than 120 days absent from work within a year, she/he may be fired. The estimated sickness absence rate will therefore, all other arrangements being equal, be higher for Norway than for Denmark simply because employees with long-term absence have been fired in Denmark (33).

Sickness absence may differ between different demographic groups such as gender, age and socio-economic status. These groups differ both within and between the countries. Work environment and unemployment rate are also important aspect in comparing sickness absence rates between countries. Other important aspects to consider/possible confounding factors in comparing sickness absence between countries are educational level, length of employment, staffing factors (different educational levels/number of employees), consensus on what constitutes a full work week, what is considered part-time work, what is the content of the various sectors so that one compares alike.

Data from the Labour Force Surveys are most commonly used today in research comparing sickness absence between countries, the data are available and useable. Gimeno and colleagues (9) discuss in a study of cross-national sickness absence the possible use of

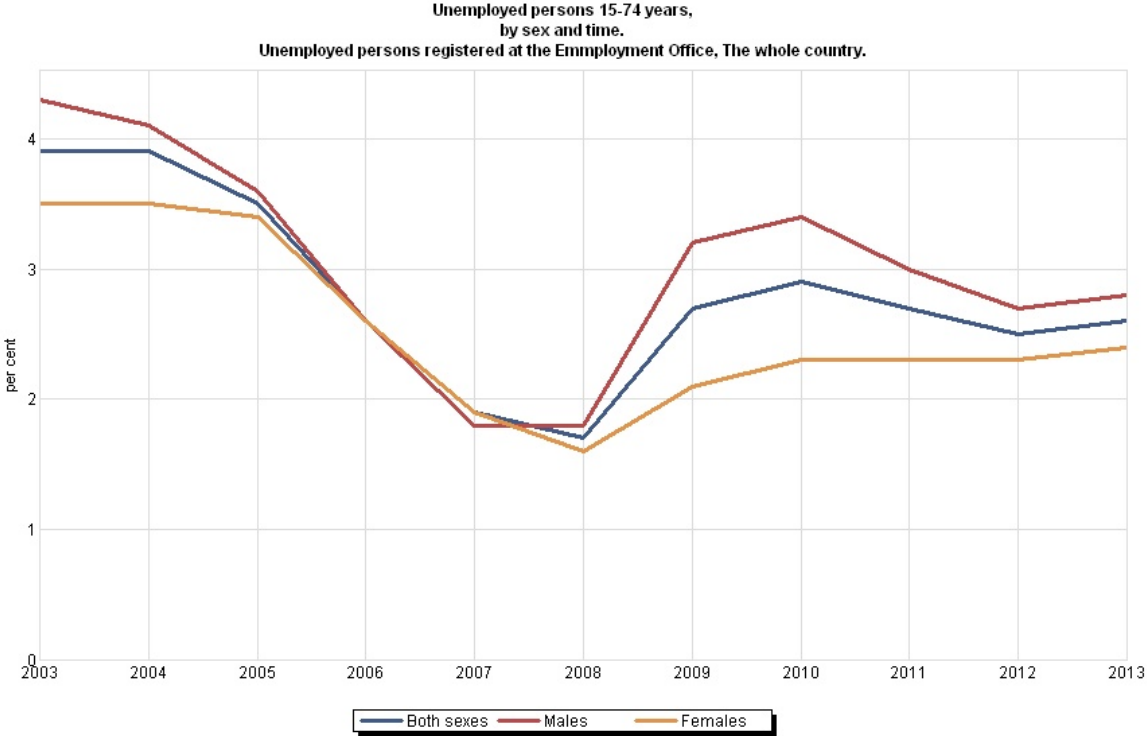
common indicators, a kind of “greatest common factor” approach as a way to compare sickness absence across countries. In our study, we used sickness absence data from the employer’s registers of two municipalities in Norway and Denmark, respectively. We have information on sickness absence from day one, length and number of sickness absence periods, which makes it possible to compare both short-term and long-term absence. This would be possible to do in other municipalities as well and between countries with reliable registers, the information is there, but data must be processed for research. In the present form data are designed to meet employers' needs and not the form needed for comparable research. Good employer registers with absence from day 1 and registration of cause of absence (own illness, children's illness, absence due to pregnancy, etc.), grading of absence, profession/education and when the employment was terminated is preferable in doing reliable comparisons of sickness absence.

#### ***1.4.3 Unemployment rates in Norway and Denmark***

The unemployment rate in Denmark has been higher than that in Norway for many years. Previous studies have shown sickness absence to be negatively correlated with unemployment; low sickness absence rates have been associated with high unemployment rates (25). In Norway, this association was strong until 2000, but has gradually weakened during recent years (72).



Figure 4. Annual average (%) of registered unemployed persons in Norway aged 15-74 by gender, 2003-2013.



Source: Statistics Norway

Figure 4 shows that the unemployment rate in Norway increased from 2000 until 2003, then it was stable for two years and from 2005 it decreased with the lowest unemployment rates in 2007/2008. Then it increased again until 2010, followed by a decrease until 2012 and then a slight increase until 2013 and it was stable in until 2014. The unemployment rates vary to some extent between women and men, but are following the same time trend.

Figure 5. Net percentage of unemployed individuals in Denmark, by sex and year, 2003-2013.



Figure 5 shows a small decrease in unemployment rate in Denmark from 2000 followed by an increase until 2004. From 2004 until 2008 there was a steep decrease in unemployment rate, then it increased until 2010, a small decrease until 2011 and so an increase again and from 2013 it has decreased until 2014. As well as in Norway, the unemployment rates vary between women and men, however the time trends show to a large extent the same overall trend.

In 2005, the unemployment rate in Norway was 4.6%, while it was 5.6% in Denmark (40;51). In the same year in France and Germany, the unemployment rate was 9.4% and 9.3%, respectively (40). In 2010, the unemployment rate was 3.5% in Norway, while it was 7.4% in Denmark (62).

Differences in unemployment rates in Norway and Denmark may explain some of the differences in sickness absence rates, as higher unemployment rates may lead to lower sickness absence rates according to the disciplinary effects hypothesis by Shapiro and Stieglitz (73) explained in this thesis in 1.6.

The time trends for unemployment rate in Norway and Denmark are to some extent similar, but with larger variation in Denmark. The unemployment rates are both higher and lower in Denmark compared to Norway, from more than 6% unemployment rate to less than 2% in Denmark while in Norway the highest rate was under 5% and the lowest around 2.5%.

#### **1.4.4 *Sickness presenteeism***

Sickness presenteeism is the phenomenon of employees turning up to work despite medical conditions that should prevent them from attending (74). Although it has been associated with negative health effects and loss of productivity, it is only in recent years that sickness presenteeism has become the focus of some research (75). A Danish study found that more than 70% of the core workforce went to work ill at least once during a 12-month period, indicating that sickness presenteeism is just as prevalent a phenomenon as sickness absence (76). Elstad (77) found that 80% of lower-level care staff in the Nordic countries had at least one episode of both sickness absence and sickness presenteeism during the previous year (77). Both sickness absence and sickness presenteeism seem to be related to various aspects of the work situation (77) and sickness presenteeism has been more strongly noted in certain occupations, particularly in those that involve caring and teaching (78). Variations among health professionals who reported sickness presenteeism suggested that it was higher for those who had greater responsibility for patient care (79).

Sickness absence and sickness presenteeism are alternative types of illness behaviour (80), and sickness presenteeism can lead to sickness absence (81). Sickness presenteeism has usually been considered a complementary alternative to sickness absence (74), but the association between sickness absence and sickness presenteeism has been suggested to increase with poor work environment, poor health, and/or stress. Going to work ill repeatedly is associated with long-term sickness absence at a later date (76). Both sickness absence and sickness presenteeism were associated with perceptions of job stress, and this tendency was particularly strong for sickness presenteeism (77). Moreover, sickness presenteeism has been reported to increase the risk of fair/poor health in the future (82;83).

However, one study suggested that sickness presenteeism is more than an alternative to sickness absence, and other, so far unknown, explanations for both sickness absence and sickness presenteeism should be sought (84). Another study showed that sickness absence and sickness presenteeism are counterparts, but the explanations for their prevalence pointed to different factors (85). Yet another study indicated the importance of communication between employees and managers at the workplace in lowering sickness absence (86).

Most of these studies were quantitative in their design (74;77;80;81;85). We have found some quantitative studies on attitudes towards work attitudes such as Rhodes (87), which reported age-related differences in work attitudes. Hansen found that those with a conservative attitude towards sickness absence were most likely to turn up ill at work (76). In a survey on attitudes towards sickness absence in the five Nordic countries, Dahl (88) found that there were few differences between Norway, Sweden, Iceland, and Finland. Denmark stood out in that on average there was greater acceptance for the various causes of sickness absence by those who participated in the survey (a random sample of the population between 18 and 65 years' old who worked 8 hours or more per week).

Overall, we found very few qualitative studies exploring attitudes towards sickness absence and sickness presenteeism. However, by interviewing individuals on sick leave in Sweden, Hansson (89) found that reporting sick is neither undertaken lightly nor for short-term reasons only.

### **1.5 Prevailing explanations for variations in sickness absence patterns**

Themes that have recently been discussed, such as sickness benefit legislation, employment protection policies, health and work capacity, unemployment, and sickness presenteeism, are aspects that influence the complex phenomenon of sickness absence at different levels (6;7). In addition to these aspects, gender, age, and education are important factors that affect sickness absence patterns at the individual level (33). Other aspects that influence sickness absence are psychosocial work environment (organisational level) and employee engagement (individual level) (90;91).

As described earlier, sickness benefit policies and employment protection policies are important factors in explaining variations in sickness absence patterns in Norway, Denmark, and elsewhere (32). Regulations concerning job security are different in Norway and Denmark, as employees in Denmark can lose their job while on sick leave (32;38;39). This may protect against long-term sickness absence in Denmark, as before long-term absence can occur, the employee could be fired and thus transferred to another social benefit scheme.

Health problems are of course another explanation for variations in sickness absence patterns. There is an increasing share of employees with sickness absence due to mental problems (92). Ihlebaek (93) found that musculoskeletal disorders are the most frequent cause of work disability. In Norway and Denmark medical care is easily accessible for most people, and thus we do not think that health problems constitute a major difference in the variation in sickness absence patterns between the two countries. The number of physicians per capita was 3.7 in Norway and 3.5 in Denmark in 2011; the OECD average was 3.2 (43). Socioeconomic factors and psychosocial work environment are also important factors for sickness absence and sickness presenteeism, and low income and low education are factors that increase the risk of these phenomena, and thus contribute to the variation in sickness absence and sickness presenteeism.

### **1.5.1 Gender**

It is commonly argued that sickness absence rates for women are higher than those for men. The (6) confirmed this pattern, as did the (68;69). In both Norway and Denmark, the gender differences in sickness absence have been relatively stable over time, and the sickness absence rate for women is higher than for men in both countries (Figures 2 and 3).

Beyond the gender differences in the sickness absence figures, there is a complex picture of biological sex differences, gender stereotypes, social structures, and a highly gender-segregated labour market (94). This segregation is clearly shown in the health and care sector of both Norway and Denmark, where the majority of employees in this sector are women.

There are many different theories as to the reasons for gender differences in sickness absence, for example the theory of double working women, i.e. women combining paid work with family obligations. However, Mastekaasa found that the association between having children and sickness absence was weak (95). Fortune (96) found that women combining full-time work and child care were a select group, characterised by unobservable characteristics that made them more likely to work full-time and less likely to have sick leave (96). In a review of the literature regarding the relationship between sickness absence and gender, Bekker (97) found that women seemed to be absent from work more frequently than men, but this varied by country, age, and professional group, and seemed restricted to short-term sickness absence (97). Kristensen and Bjerkedal found that only part of the difference in sickness absence could be explained by absence due to pregnancy (98). A study by Smeby (99) found that gender differences in sickness absence could not be explained by work-related factors or by general health or mental distress (99). However, Laaksonen et al (100) found that differences in occupations held by women and men explained a substantial part of the excess in sickness absence among females.

### **1.5.2 Age**

The general pattern in sickness absence is for older employees to be absent more than younger ones (6). However, averages can cover important variations: older employees in some countries are more likely to attend work, although if they have sickness absence it tends to be for a relatively long time. For example in Belgium, the youngest employees have the greatest frequency of sickness absence, while older employees are, on average, absent for a longer duration (6). One explanation is that younger employees may use short absences as a form of escape from the demands of work, while older employees become accustomed to the job demands and go absent for health reasons (101). Fleten (28) found that younger employees were brought up in the sickness absence culture and among the workplace norms that shape sickness absence behaviour (101). Rhodes (87) found consistent age-related differences for a number of work attitudes and behaviours, but could not identify causal factors. One report found that a higher share of elderly women in Norway was working

compared to Denmark (5) and this could suggest one reason for higher sick leave rates in Norway among elderly female employees.

### **1.5.3 Occupation**

The primary work tasks for nurses and nursing assistants is to care for patients. Occupational groups whose everyday tasks are to provide care or welfare services (or teach or instruct) have a substantially increased risk of sickness presenteeism and of higher sickness absence (74). Job stress might influence sickness absence and sickness presenteeism, and higher job stress among Norwegian care employees compared to Danish care employees has been reported (77).

Various studies have also indicated that perceived high occupational stress combined with and low social support is predictive for sickness absence (102-104). A significant proportion of all sick leave may be due to illness caused by working conditions and heavy physical work; difficult work postures and low job control are particularly important factors (105). Mehlum claimed that employees who suffer from work-related illnesses have a greater need for sickness absence than employees with similar illnesses caused by factors other than their work (105).

## **1.6 Hypotheses explaining sickness absence**

Shapiro and Stiglitz introduced the disciplinary effects hypothesis ("disiplineringshypotese"), which says that an increase in unemployment has a disciplinary effect on employees, resulting in a reduced propensity to be absent and a reduced duration of absence without a corresponding change in employees' health status (73). Indeed, unemployment is considered a disciplining factor that prevents employees from shirking when the employer cannot verify the validity of their absence. Sick leave is lower when the unemployment rate is high because employees consider the risk of losing their jobs to be greater. As a result, individuals go to work even if they are sick (72).

Karasek (106) introduced the demand-control hypothesis; positions with high demands and low influence can lead to stress and dissatisfaction, with consequent increased risk of sickness absence. This so-called stress hypothesis (“arbeidsmiljøhypotesen”) explains changes in sickness absence by the pressure of work and efficiency requirements, which increase during times of economic recovery. Studies have found that employees in the health and care sector experience high job pressure, job attachment, and few possibilities to influence their job (107). These factors are known to influence the work environment and the sickness absence level. Socioeconomic factors and psychosocial work environment are well known to have impact on sickness absence. Another aspect that has been included in Karasek’s demand-control hypothesis is social support. Support from colleagues and management are considered to counteract the negative effects of high demands and low control.

The labour force composition hypothesis (“sammensetningshypotesen”) assumes that individuals have limited influence on their own sickness absence (72). The hypothesis explains increasing sickness absence by the composition of the workforce, which is different in periods of recovery and recession. When there is a shortage of labour, the labour market opens up to marginal groups or individuals with impaired or ill health. It is assumed that these individuals have higher sickness absence than stable employees.

These hypotheses are important in regard to unemployment, psychosocial work environment, and the composition of the workforce and are thus relevant to this study. These hypotheses will be discussed in relation to our results in section 5 - discussion of main results.

### **1.6.1 *Psychosocial work environment***

Psychosocial work environment is important to understand and explain sickness absence and presenteeism. Allebeck (90) claimed that the work environment and characteristics of the labour situation have received the most attention in research. A number of characteristics of work and the workplace, such as physical and psychosocial risk factors, safety/accident risk, the organisational work environment, management, general well-being, etc., have been the object of research. A number of standardised indicators have been developed to measure



different aspects of the work environment, mostly using questionnaires. A study on work-related psychosocial risk factors for long-term sick leave underlined the importance of taking these exposures into account (108). Different forms of stress e.g. somatic, behavioural, emotional, and cognitive are all found to be correlated moderately sickness absence (109). Significant predictors of long-term sick leave were high levels of role conflict, emotional demands, and low support from leadership. The risk for sick leave was higher in women, older employees and employees with fewer years of education. Sterud (110) found that work-related mechanical and psychosocial factors contribute to the social gradient in long-term sick leave. The work-related factors that accounted for this gradient were similar for men and women (110).

### **1.6.2 Employee engagement**

Employee engagement is the extent to which employees feel passionate about their jobs, are committed to the organisation, and put discretionary effort into their work (111). The concept of engagement has evolved from prior research on work attitudes, implying that this newer concept adds interpretive value that extends beyond the boundaries of those traditions (111). Employee engagement has been defined as a distinct and unique construct that consists of cognitive, emotional, and behavioural components that are associated with individual role performance (91). It has been claimed that employee engagement predicts employee outcomes, organisational success, and financial performance (91). However, engagement is an individual-level construct, and thus if it is to lead to business results, it must first impact individual-level outcomes. Following these lines, there is reason to expect that employee engagement is related to individuals' attitudes, intentions, and behaviours (91).

The relevance of psychosocial work environment and employment engagement to this thesis will be discussed in section 5 - discussion of main results.



## 2. AIMS OF THE THESIS

In section 1 of this thesis we presented a discussion on various factors which may influence the sickness absence rate and pattern at different theoretical levels (structural, organisational, and individual). We have shown the importance of comparisons of sickness benefit policies and sickness absence patterns, and that international comparisons are needed to enable overall patterns across countries to be observed, thereby indicating which policies are working, from both a public health and economical point of view (1;26). We have not found any studies comparing sickness absence patterns in the health and care sector in Norway and Denmark. The two countries are apparently quite similar, yet the sickness absence level is higher in Norway compared to Denmark. Studies on sickness absence patterns and attitudes towards sickness absence and presenteeism in the two countries and eventual differences may give an indication of the mechanisms behind differences in sickness absence level.

The overall aim of the thesis was to compare sickness absence patterns in the health and care sector in two municipalities in Norway and Denmark, respectively, in order to contribute to the understanding of the mechanisms behind sickness absence and sickness presenteeism. The emphasis was on sickness absence rate, number of sick leave episodes and short- and long-term absence. We studied the sickness absence trends in Norway compared with Denmark and explored the attitudes towards sickness absence and sickness presenteeism in both countries. We wanted to explore what nursing home employees thought regarding sickness absence and sickness presenteeism and how their attitudes might influence patterns of sickness absence and sickness presenteeism. This resulted in our qualitative study of attitudes towards sickness absence and sickness presenteeism in two different countries and cultural settings.

More specifically this project investigated the level of sickness absence, the length and number of sick leave episodes, and changes in these measures over time between Norway and Denmark, and if any changes applied to both countries equally or if patterns differed between the countries. We compared different age-groups both within each country and between the countries according to sickness absence patterns (frequency, levels, length, and

trends). Furthermore, we explored if there were differences in attitudes towards sickness absence between Norway and Denmark, in the light of lower sickness absence rates in Denmark compared to Norway.

The specific aims of this thesis were:

### **Paper I**

To compare the sickness absence patterns of municipal employees in the health and care sector in Kristiansand, Norway and Aarhus, Denmark, with an emphasis on the differences between sickness absence rate and number of sick leave episodes in association with age, percentage of employment, and occupation.

### **Paper II**

To assess the development in sickness absence rates, short-term and long-term absence, and frequency of sick leave episodes from 2004 to 2008 in the health and care sector in the municipalities of Kristiansand, Norway and Aarhus, Denmark.

### **Paper III**

To explore attitudes towards sickness absence and sickness presenteeism in varying social and structural settings by interviewing nursing home employees in Kristiansand, Norway and Aarhus, Denmark.

### 3. METHODS

This thesis could be described as a combination of methods. Papers I and II are quantitative and Paper III is qualitative in its design (112;113). The research question drove the choice of design and methods. The aim of Paper I was to investigate sickness absence patterns in Norway and Denmark measured as sickness absence rate, short- and long-term absence, and frequency of sick leave episodes. In Paper II, the aim was to study trends in sickness absence rate and in mean number of sick leave episodes. For both of these aforementioned aims, the most appropriate approach is a quantitative one. The aim of Paper III was to explore attitudes towards sickness absence and sickness presenteeism in Norway and Denmark. Previous studies on attitudes towards sickness absence have been carried out using quantitative methods, however we wanted to investigate and explore what employees thought about sickness absence and sickness presenteeism and how they managed it using a meaning-based, interactionist approach. This research aim of Paper III was therefore best obtained using qualitative methods, in this case focus group discussions (FGDs).

There are several ways of combining quantitative and qualitative approaches, also termed mixed-methods research (114-116). Malterud (117) argued that quantitative and qualitative strategies should be seen as complementary rather than incompatible. There are different ways to combine quantitative and qualitative approaches: merging, sequencing and concurrent use of tools and attitudes. Merging consists of swapping tools and attitudes from one tradition to the other (115). In addition to merging, there are two other types of combining methods: sequencing and concurrent use of tools and attitudes (115). Time ordering of the quantitative and qualitative phases is an important dimension, and the phases can be carried out sequentially or concurrently (114;116). Other dimensions to consider in mixed-methods research is the degree of mixture, which forms a continuum from monomethod to fully mixed methods that should reflect where mixing is to occur (in the objectives, methods of data collection, research methods, during data analysis, or during data interpretation) (116).

Before we did the FGDs, we had started to process and harmonise quantitative register data from Norway and Denmark and had some preliminary results for Paper I. Based on previous studies and our preliminary results, we decided to include nursing home employees, all age-groups, both sexes, all education/occupational levels and urban and rural geographical location. Papers I and II were conducted more or less in parallel for time and practical reasons. Paper III was conducted when Paper I was nearly completed and Paper II was still in progress. Our mixed-methods design is based on the crossing of time ordering of the quantitative and qualitative phases, which allowed us to use the results of the qualitative study to elaborate on the results of the quantitative studies.

### **3.1 Quantitative studies - Papers I and II**

#### ***3.1.1 Data***

Data recorded in the personnel registers of the municipalities of Kristiansand, Norway and Aarhus, Denmark from 2004 to 2008 were used in this thesis. We had information on all sickness absences in the municipalities from day one. Sickness absence rates, and number and length of sick leave episodes were calculated for 2004 and 2008 combined in Paper I. In Paper II, sickness absence rate, number and length of sick leave episodes were calculated for each year from 2004 to 2008. The sickness absence level was measured as days of sickness absence in percent of possible working days and in number of sick leave episodes. The study population was restricted to health and care sector employees in order to avoid differences related to jobs and occupational groups.

#### ***3.1.2 Measurements***

In this thesis, sick leave patterns were measured in terms of sickness absence rate and number of sick leave episodes (8). The sickness absence rate was calculated as follows:

$$\sum (\text{calendar days of sickness absence} * 5/7) / (\sum (\text{possible working days}) * 230(220)/365).$$

To calculate the numerator, we relied on “calendar days”, which represents all days, including weekends and public holidays. However, weekend and holidays were not included in “possible working days”. For the type of work performed in the health and care sector it is most valid to use calendar days because work is carried out 7 days a week regardless of weekends and public holidays.

A formal working year is 230 days in Norway and 220 days in Denmark. A single sick leave episode can last from 1 to 365 days. Absences interrupted by 1 day without sickness benefits, typically on weekends, were registered as a single period. Results presented consist of sick leave episodes that ended in 2004 and 2008, respectively.

### ***3.1.3 Statistical analyses***

Data were analysed using Stata for Windows, version 12. In Paper I, we performed gender-specific comparative descriptive analyses of frequency of sickness absence and sick leave episodes by age, percentage of employment, and occupation (derived from education in Norway). Multivariate negative binomial regression models were applied to identify mutually-adjusted predictors of sickness absence rate and number of sick leave episodes in Norway and Denmark in a pooled dataset. Because of over-dispersion in the data, this model is preferable to the Poisson regression model for count data (118). Incidence rate ratios (IRR) and corresponding 95% confidence intervals (CI) are reported as measures of absence rate ratio.

In Paper II we performed age-specific comparative analyses of patterns of sickness absence and sick leave episodes in women measured by rates and frequencies for each year from 2004 to 2008, with corresponding p-values for linear trend.

## **3.2 Qualitative study – Paper III**

### **3.2.1 Data**

In Paper III data was provided from FGDs carried out among staff in nursing homes in Norway and Denmark. The topic of the FGDs was attitudes towards sickness absence and sickness presenteeism in nursing homes in these countries. FGDs were chosen as the method because the purpose was to gain insight into employees' attitudes, perceptions, and thoughts about sickness absence (119-121), and to encourage them to discuss and explain how they managed sickness absence and sickness presenteeism in a meaningful way between colleagues. Furthermore, we wanted to explore differences among employees, e.g. in terms of age, urban or rural geographical location, different explanations, and/or other factors influencing the topics discussed. In FGDs, participants describe and reflect upon subjective sensations, experiences, views, and attitudes towards sickness absence and sickness presenteeism (121;122). Unlike individual interviews, FGDs obtain information from a group through a dynamic, interactive process (123).

### **3.2.2 Focus Group Discussion**

Focus groups discussions have become increasingly popular in health research and this method of collecting data is both efficient and amenable to a broad range of topics (124;125). Focus groups are another form of data production than individual interviews and when using focus groups for data production one produces empirical data on group level on a topic determined by the researcher (126).

Information generated through interaction between members of focus groups gives focus groups a number of strengths and challenges (126). Focus groups are relevant to use when the topic of the research relates to group processes, such as establishing group norms, developing a consensus statement, resolving differences of opinion or interrogating new developments or procedures (125;127). Halkier (126) claims that focus groups are capable of producing data with many normative negotiations, and draws forward that it is the social



interaction which is the source of data. Further, a strength of focus groups is their ability to produce concentrated data about a particular subject and they are not as intrusive for participants such as field work and participant observation. On the other side, a possible weakness with focus groups is the possibility to miss interesting information that you only have access to by being present in people's natural social contexts (126). Due to the strengths of focus groups and the aim of the study, we found it useful to use focus groups in our study to explore attitudes towards sickness absence, developed in a context of interaction among professionals.

Several researchers (127;128), emphasise the importance of the interaction between focus groups participants. Focus group members' comment on each other's points of view, maybe challenge each other's motives and actions, i.e. participants will not always address their remarks via the moderator but react to group members' responses (124). Further, (124) argues that with group interviews, agreements or disagreements are fundamental processes that influence the nature and content of responses as the group progresses.

Morgan emphasizes that "The hallmark of focus groups is the explicit use of group interaction to produce data and insights that would be less accessible without the interaction found in a group" (129). It is the social interaction between the participants that constitutes the data and, as Barbour and Kitzinger (128) point out: "in focus group discussions meanings are constantly negotiated and renegotiated". This we experienced in our study as well and how we saw this and how it became part of our analysis will be elaborated upon in chapter 6.

However, it is an act of balance how to understand the knowledge production of focus group discussions. On the one hand, it is individuals that respond, but they respond both by virtue of their own attitude and by virtue of the group's attitude. We consider the analysis as a product of the collective statements, and see the group as the analytic unit. However, it can be difficult to disentangle the focus group participants' responses and their relationship to the social context of the focus group but basically we consider the individual responses as contributions to the discussion as a whole, constructed as a result of the organized focus group.

Analysing focus groups from a social scientific theoretical angle one is likely to understand the knowledge produced as contextual, relational and potentially mutable (126). In our study we have analysed the data from that perspective. The analysis is based on the assumption that social actors socially construct their reality and hence, data are produced in and a result of interaction among the participants of the focus groups. Further, our analysis seeks to point out mechanisms and socio-cultural representations or conditions that show at a more general level how meaning-giving activity is constructed and in which contexts it is embedded. These representations are for example the notion of morality and as we have interpreted it; moral evaluation of colleagues with sickness absence; and attitudes towards sickness presenteeism.

### **3.2.3 Qualitative analysis**

Data were analyzed using NVivo, version 9.0. In Paper III, we performed eight FGDs based on a semi-structured interview guide that covered the following topics: description of a typical work day, management of sickness absence, causes of sickness absence, sickness presenteeism, length of sickness absence (long or short as per employee perception), management of sickness absence by colleagues (practically, morally, and socially), job acknowledgement, and job satisfaction (Table 2, Paper III). Each FGD lasted between 1 and 1-1/2 hours. Due to sickness absence, one of the FGDs was completed with only two participants.

FGDs were recorded, transcribed and analysed using Framework Analysis to identify major themes, explanatory patterns and perspectives on sickness absence (130;131). We planned and developed a 3-day workshop in which three authors took place to explore and validate coding and inferences, and to substantiate the interpretation of the data. All authors represented different critical positions towards validity (see Paper III) and the aim of the workshop was to discuss and agree on the framework, index, and the interpretation of the perspectives. Four significant themes were identified: sickness absence and sickness presenteeism, acceptable causes of sickness absence, job identity and organisation of work, and physical aspects of the workplace.

### **3.2.4 Framework Analysis**

Framework analysis, also called framework method, has become increasingly popular in medical and health research and the method was developed by Jane Ritchie and Liz Spencer in the 1980s (132;133). According to Gale (132) Framework analysis/method offers “clear steps to follow and produces highly structured outputs of summarized data”: a set of codes organised into categories that have been jointly developed by the researchers involved in the analysis that can be used to manage and organise the data (132). Further, the framework method creates a new structure for the data that is useful to summarize/reduce the data in a manner that can support answering the research questions (132). Some key characteristics of the method are the case and theme based approach, a matrix display, reduction of data through summarisation and synthesis, retaining link to original data and allowing for comprehensive and transparent data analysis.

Framework analysis has not only an organizing, but also an interpretive dimension added to its analytic pathway. This fits into the basic research paradigms for most qualitative research and it allows for the application of several interpretive approaches, such as the social constructionist approach, which is used in this study and described above.

Comparing and contrasting data is vital to qualitative analysis, and the ability to compare data across cases as well as within cases is built into the structure and process of the Framework analysis (132). Data must cover similar topics or key issues so that it is possible to categorize it, as Framework analysis cannot accommodate highly heterogeneous data (132). In our study, we have maintained this by doing semi-structured focus group interviews in nursing homes with colleagues in both Norway and Denmark. We did interviews in similar working places with employees doing the same type of work, the participants were colleagues, the FGD were done at their working places and the interview guide were similar in both countries. The topics discussed were possible to categorize and compare and contrast within and across countries.

Framework analysis is not based on any known approaches (133). Ward (134) claims that Framework analysis is a method of analysis rather than a research paradigm such as

ethnography, phenomenology, or grounded theory, and Gale (132) claims that it is not aligned with a particular epistemological or theoretical approach.

Although Framework analysis is a structured and systematic method of categorizing and organizing qualitative data it is not an easy way out of complex issues commonly associated with qualitative data analysis. Framework analysis can be useful when experienced researchers are supporting new qualitative researchers because it provides a clear track of how data moved from interview to transcript to themes, with summaries in charts enabling all researchers to discuss ideas (134). Gale (132) emphasizes/points out that qualitative research skills are required to appropriately interpret the matrix and facilitate the generation of descriptions, categories, explanations and typologies. This has been taken care of in our study as several of the researchers participating in the study were experienced qualitative researcher supporting the less experienced researcher.

Framework analysis has been used for applied policy research, and Srivastava and Thomson points out that this method "is better adapted to research that has specific questions, a limited time frame, a pre-designed sample (e.g. professional participants) and a priori issues (e.g. organizational and integration issues)" (131). Further, Srivastava and Thomson claim that the analysis "provides an excellent tool to assess policies and procedures from the very people that they affect. Thus amendments to policies and procedures that reflect the needs and wants of employees translate to a greater level of compliance" (131).

Our study is part of a priority by the Norwegian authorities to reduce sick leave, and in that manner the study may be understood as a contribution to applied policy research, i.e. we do not study policy procedures as such but instead how sickness absence policies affect nursing home employees, as well as the experience of sickness absence, with the hope of contributing to ongoing research on interventions towards sickness absence and policy planning. We have specific questions, semi-structured interview guides in both Denmark and Norway, and interview professional participants, health care workers in nursing homes. The overall purpose is to gain insight and knowledge into the complex issues of sickness absence in order to be able to reduce the consequences of it.

If the intention is to give back to policy, there is a risk embedded in the analysis that the researchers' interpretation may be over-reported for a specific purpose. This requires a constant reflection on whether the analysis is trustworthy, rich and reflects the empirical data. In our study we had a semi-structured interview guide with themes we wanted to discuss in the FGD. These themes and other themes that were identified through the analysis, showed different degrees of meaningfulness and relevance for the group and the participants. The elaboration of meaningful themes was not something we had decided on beforehand, but something that was identified during the analysis. A 3-day workshop was held to explore and validate coding and inferences and to substantiate the interpretation of the data. This is elaborated in chapter 5. Whichever analysis strategy is chosen affects the outcome and any analysis strategy has its limitations. One example, however, of how the analysis shows not to be twisted towards policy outcome is that the focus on morality which is dominant in the analysis is difficult to translate directly into policy, and this decreases the risk of a limited perspective in this study.

Overall, we believe that our policy interests did not affect the analysis immediately, and we have made steps to promote a valid process in the analysis where themes were identified as the meaning-based units of the group and interpreted both at group level, contextualised and discussed in the light of relevant theory.

We have also tried to overcome limitations in general by being several researchers who consider the various stages of the analysis, and critical questions and assessments were done consistently through the analysis and interpretations.

### 3.3 Study sample

#### 3.3.1 Paper I

Data recorded in the personnel registers of the municipalities of Kristiansand, Norway and Aarhus, Denmark in 2004 and 2008 were used in this study and sickness absence rates and number of sick leave episodes were calculated for these 2 years combined to increase the power of the statistical analyses. The study population included 3498 and 7751 employee-years in the Kristiansand and Aarhus municipalities, respectively. Individuals employed less than 12 months and employees having less than 20% employment were excluded from the study and employees having maternity leave, adoption leave or other kinds of parental leave, and students were excluded entirely.

Therefore, the final analyses were based on 3118 and 6673 employees in Norway and Denmark, respectively, who contributed 1 or 2 employee-years to the study. Nurses and nursing assistants constituted the largest employee group in the health care sector in both countries and are comparable across the countries. Employees employed in 2005 or later are younger and have significantly lower absence than the other in both Denmark and Norway.

Category of education was recorded in Norway, whereas the comparing variable in Denmark was occupation, as information on education was unavailable. Therefore, we used education in Norway to determine occupation (nursing school education = nurse; nursing assistant education = nursing assistant; other education = other occupation) and refer to occupation in the study results. Other occupation refers to all other staff in a nursing home.

Percentage of employment was calculated based on a normal work week, which in Norway is equivalent to 37.5 hours and in Denmark 37 hours. The age of the employees ranged from 20 to 67 years old.

### **3.3.2 Paper II**

At baseline in 2004, the study sample included 2004 and 4275 employees in the municipalities of Kristiansand, Norway and Aarhus, Denmark, respectively. Including new employees starting their employment during the follow-up period, a total of 3181 and 8545 employees, respectively, participated in the study. Individuals having less than 20% employment were excluded from the study, and employees on maternity leave, adoption leave or other kinds of parental leave, and students, were excluded. The age of the employees ranged from 20 to 67 years old. The proportion of male employees in the health and care sector was too low in both Norway and Denmark to achieve satisfactory power (10.3% and 4.7%, respectively), so they were also excluded from the study.

### **3.3.3 Paper III**

Eight FGDs were conducted using a semi-structured interview guide. FGDs were conducted in four nursing homes, two in Norway and two in Denmark. The four nursing homes had different geographic locations, with one in a rural area and one in an urban area in both Norway and Denmark. A team of two researchers, one Norwegian and one Danish, led all FGDs. The Norwegian researcher was the moderator in the FGDs in Norway, and the Danish researcher was the assistant moderator, and their roles were reversed in the FGDs in Denmark. The interviews were performed in Norwegian or Danish, according to country. Invitation letters were sent to the municipalities of Kristiansand, Norway and Aarhus, Denmark, which were responsible for selecting the nursing homes included in the study. The administrative leaders of the nursing homes then selected the focus group participants according to information from the researchers on how the groups should be composed. In both countries, we interviewed the participants during the workday at their workplace in order to have as much similarity as possible across the FGDs.

Focus groups were divided into a younger (<40 years old), and an older group (>50 years old) at each of the four nursing homes, and each focus group consisted of four to six participants (Table 1, Paper III). The educational/occupational level in this study varied from nursing

assistants (1-2 years at secondary level with internship) to nurses (3 years at college level). However, nursing assistants were the most prevalent group in our study sample in both Norway and Denmark.

The age of the participants ranged from 21 to 66 years old, and all participants were women, due to the fact that very few men working in nursing homes in the two countries. Only two nurses participated in two of the FGDs (one nurse in each interview).

### **3.4 Ethics and consent**

The selected health care employees received an invitation letter, informing them of the aim of the study and the confidentiality of the study. The project was approved by the Data Protection Official for Research through the Norwegian Social Science Data Service (approval number 24090). The project was subject to the rules for processing personal data (see § 7-27 of the Personal Data Regulations). Approval (2012-41-1290) was also given by the Danish Data Protecting Agency. Informed consent was obtained from all participants before the FGDs.



## 4. RESULTS – SUMMARY OF PAPERS

### 4.1 Paper I

#### **Comparison of sick leave patterns between Norway and Denmark in the health and care sector: A register study.**

Krane L, Fleten N, Stapelfeldt CM, Nielsen CV, Jensen C, Johnsen R, Braaten T. *Scand J Public Health* 2013; 41:684-691

The aim of the study was to compare sickness absence patterns according to age, percentage of employment, and occupation between municipal employees in the health and care sector in Kristiansand, Norway and Aarhus, Denmark.

Data recorded in the personnel registers of the municipalities of Kristiansand, Norway and Aarhus, Denmark were extracted for the years 2004 and 2008, revealing 3498 and 7751 employee-years, respectively. We calculated absence rates together with number of sick leave episodes, and their association with the above-mentioned covariates. Gender-specific comparative descriptive statistics and negative binomial regression analysis were performed.

The sickness absence rate in women was 11.3% in Norway (95% CI 11.2-11.4) and 7.0% in Denmark (95% CI 7.0-7.1), whereas mean number of sick leave episodes among women was 2.4 in Denmark, compared to 2.3 in Norway ( $p=0.02$ ). Young employees in Denmark had more sick leave episodes than in Norway. Proportion of employees with sickness absence was higher in Denmark than in Norway ( $p<0.0001$ ).

The finding that employees in Denmark have more frequent, but shorter sick leave episodes compared to Norway, for whatever reasons, may indicate that more frequent sick leaves episodes might have the potential to prevent higher sickness absence rates.

#### 4.2 Paper II

##### **Sickness absence patterns and trends in the health care sector: 5-year monitoring of female municipal employees in the health and care sectors in Norway and Denmark.**

Krane L, Johnsen R, Fleten N, Nielsen CV, Stapelfeldt CM, Jensen C, Braaten T. *Hum Resour Health* 2014; 12:37

The aim of the study was to compare time trends in sickness absence patterns between municipal employees in the health and care sector in Norway and Denmark between 2004 and 2008.

Data recorded in 2004 to 2008 in the personnel registers of the municipalities of Kristiansand, Norway and Aarhus, Denmark were extracted for 3181 and 8545 female employees, respectively. Age-specific comparative statistics on sickness absence rates and number of sick leave episodes was calculated for each year of the study period.

There was an overall increasing trend in sickness absence rates in Denmark ( $p=0.002$ ), which was highest in the 20-29-year ( $p=0.01$ ) and 50-59-year age-groups ( $p=0.03$ ). Sickness absence rates in Norway were stable, except for an increase in the 20-29-year age-group ( $p=0.004$ ). In both Norway and Denmark, the mean number of sick leave episodes increased ( $p<0.0001$  and  $p<0.0001$ , respectively) in all age-groups except 30-39 and 60-67 years. The proportion of employees without sickness absence was higher in Norway than in Denmark. Both short-term and long-term sickness absence increased in Denmark ( $p=0.003$  and  $p<0.0001$ , respectively), while in Norway only short-term absence increased ( $p=0.09$ ).

We found an overall increase in sickness absence rates in Denmark, while the largest overall increase in sick leave episodes was found in Norway. In both countries, the largest increases were observed among young employees. The results indicate that sickness absence patterns, measured as rates and episodes, in the two countries are converging.

### 4.3 Paper III

#### **Attitudes towards sickness absence and sickness presenteeism in health and care sectors in Norway and Denmark: a qualitative study.**

Krane L, Larsen EL, Nielsen CV, Stapelfeldt CM, Johnsen R, Risør MB. *BMC Public Health* 2014; 14:880

The aim of the study was to explore attitudes towards sickness absence and sickness presenteeism among nursing home employees in the municipalities of Kristiansand, Norway and Aarhus, Denmark. Eight FGDs were conducted using a semi-structured interview guide, the main attention of which was attitudes towards sickness absence and sickness presenteeism. FGDs were conducted in two nursing homes in Norway and two in Denmark, with different geographic locations: one in a rural area and one in an urban area in each country. FGDs were recorded, transcribed, and analysed using Framework Analysis to identify major themes and patterns.

Four major significant themes were identified from the FGDs: aspects of sickness absence and sickness presenteeism, acceptable causes of sickness absence, job identity, and organisation of work and physical aspects of the workplace. All themes recurred in both countries. Our analyses showed that social commitment and loyalty to residents and colleagues was decisive in sickness absence and sickness presenteeism, as were perceived acceptable and non-acceptable reasons for sickness absence, which differed across workplaces and across participants, but not between countries. Organisation of work and physical aspects of the workplace were also found to have an impact on sickness absence.

Inter-relational dimensions had an important influence on sickness absence and presenteeism in both Norway and Denmark. The perception held by colleagues and management as to what constituted acceptable and non-acceptable reasons for sickness absence were important aspects of practicing social control in the workplace, and the reasons were the same in both countries apart from small differences between employees in urban and rural areas in both countries. For example, an acceptable cause for sickness absence could be physical illness, whereas cold and stomach pain were acceptable to some extent, but still disputable. The process of acceptance of a certain causes of sickness absence became a

form of social and moral control. The general interpretation of the findings was that attitudes towards sickness absence and sickness presenteeism among nursing home employees were embedded in situational patterns of moral relationships and were connected to a specific job identity.

## 5. DISCUSSION OF METHODOLOGY

The discussion of methodology is divided into parts. First, we discuss the challenges of combining quantitative and qualitative methods, followed by a discussion of register versus survey data and an overview of general methodological considerations of quantitative and qualitative studies. Finally, a summary of strengths and limitations is described.

### 5.1 Mixed-methods approach: combining quantitative and qualitative methods

There has been a growing interest among health researchers for the possibility of combining quantitative and qualitative methods because of the complexity of the many different factors influencing health (129;135-137). Combining quantitative and qualitative methods may also be named mixed methods (114;138). In combining quantitative and qualitative methods it is essential to recognise the deep epistemological differences in these approaches in regard to the pursuit of knowledge (129;139;140).

There has been, and to some extent still is, a huge debate about quantitative and qualitative research paradigms, which has led to a great divide between quantitative and qualitative researchers (141). However, combining paradigms and methods should be possible if the researchers have a clear understanding of the different paradigms. If the rationale for the project suggests using different approaches, then the selection of an appropriate method or combination of methods is initially a technical task (116;129). The rationale in this thesis was to study sickness absence, measured as rate and number of sick leave episodes, and attitudes towards sickness absence and presenteeism. To study rates and numbers we used quantitative methods; to study attitudes towards sickness absence we found qualitative method most appropriate because we wanted to explore what the participants thought about sickness absence and presenteeism.

Mixed method approaches are still developing in form and substance (112;113) and we did not find any study which combined quantitative and qualitative methods in a between-country

comparative study design. Therefore, this thesis is an attempt and a suggestion to how quantitative and qualitative methods can be combined in a comparative study.

In this thesis comparable register data were used to compare sickness absence levels, patterns, and trends, and FGDs were used to explore attitudes towards sickness absence and presenteeism. The theoretical basis for quantitative and qualitative studies is different. In quantitative studies analytical and positivistic approaches are most common and the prediction is to investigate whether there is an association and how strong it is. In qualitative studies, interpretive methods such as hermeneutics or methods based on human experience such as phenomenology, is often used and the understanding, equivalent to prediction in the quantitative studies, is to examine how reality is perceived or understood (116). This is a coarse division of the two methods and we will further discuss the differences in the following sections.

Research questions are formulated differently in quantitative studies compared to qualitative studies. In quantitative studies the aims are formulated as a hypothesis and the statistical analyses and tests are very often decided in advance of the study. In qualitative studies the aims are often formulated as explorative, indicating a problem to be investigated, but not in terms of a hypothesis. End results of a qualitative study may provide hypotheses to be tested in e.g. quantitative studies (114). One of the challenges with a mixed-methods approach is the understanding of the different paradigms and how to combine them in a constructive way so that they become something more than just two methods and paradigms that are next to each other.

The analytical approaches are different between quantitative and qualitative studies. Descriptive statistics and multivariate negative binomial regression analysis were applied to register data on sickness absence. Negative binomial regression models were chosen because of over-dispersion in the sickness absence data.

Framework Analysis was applied to interpret and analyse the qualitative data. This method was preferred because it was developed for applied policy research, e.g. research that meets

specific information needs and may inform future actions or interventions (130;131) to which we wanted to contribute.

There are also differences in the interpretation of results. The results of the quantitative analysis in Paper I were interpreted as a percentage of total N which has sickness absence and mean sick leave episodes, as CIs, p-values and IRRs, typical quantitative measurements giving us important information about a large number of people, often referred to as a cohort. Regression analysis is a statistical process for estimating the relationship between the dependent and one or more mutually adjusted independent variables, in order to isolate the effect of each one of them. In Paper I, the sickness absence pattern by percentage of employment is different in the descriptive analysis and in the regression analysis due to the distinction between crude and adjusted numbers.

In Paper II it is also referred to a percentage of total N which has sickness absence, to CIs and p-values for trends. We got information over a large number of people and investigate the changes in sickness absence over years. From the trend analysis we observed the largest increase in sickness absence among young employees in both countries. This interpretation of results is in contrast to the interpretation of the qualitative study, which gave us information about a limited amount of participants. However, the qualitative study allowed us the opportunity to explore how the participants think and behave as they do. We analysed and interpreted this data, which gave us new knowledge about what goes on at the workplace and between the participants according to sickness absence and sickness presenteeism, i.e. their emphasis on situational patterns of moral relationships connected to a specific job identity independent of country.

It is a challenge to combine the results of quantitative and qualitative studies in a good way. The results from the qualitative study can be used to add meaning to the numbers, and numbers on the other hand can be used to add precision to the qualitative data (116). Combining the results can add insight that might be missed when only a single method is used and qualitative and quantitative research can, used together produce more complete knowledge necessary to inform theory and practice (116). In our study, we experienced that the participants in the FGDs in Norway discussed the working hours to a much larger extent

than the Danish participants. From the numbers, we found that in Norway there was a greater proportion of employees with a small percentage of employment than in Denmark. In the FGDs in Norway we learned that several of the participants with a small percentage of employment would have preferred to work more, while in Denmark the participants expressed satisfaction with the percentage of employment they had.

Education was discussed in the FGDs, though not as much in Norway as in Denmark. Looking at the numbers we found that there were far more nurses employed in Norway compared with Denmark, and this may indicate that nurses and nursing assistants in Norway have more similar work tasks than was the case in Denmark, where there were fewer nurses employed.

We could not have obtained the insight we got from the FGDs through quantitative methods, and we could obviously not have got knowledge about the numbers by using qualitative methods (142;143). Combining methods gave us insight into different aspects of the complex phenomenon of sickness absence and sickness presenteeism that we would not have gained otherwise. Applying similar research methods in both Norway and Denmark on similar study populations gave us the opportunity to make comparisons.

## **5.2 Register data versus survey data**

Different types of data have been used in international reports comparing sickness absence rates across countries. Surveys like the LFS, which is conducted in all EU/EEA countries, are often used for international comparisons of sickness absence. Norway comes forth with a relatively high sickness absence rate in these surveys. The OECD and Eurostat use mostly LFS numbers in international comparisons of sickness absence. But the main purpose of LFS is to provide information on employment and unemployment; the survey is not primarily designed to provide figures for sickness absence (66).

As discussed in 1.4.2, the LFS uses only one question concerning sickness absence and due to differences in sick pay schemes, and other institutional arrangements, e.g. employment



protection, the results may be biased (66). Only people who have had a job are asked if they have been sick. The respondents had to go through many questions before the question measuring sickness absence. According to a Nordic report on sickness absence (33) the telephone interviewer asks if the respondent has had a job and if she/he worked last week, and only if the respondent did not work full time the previous week, the interviewer asks if it was due to sickness. Since only people who have had a job are asked if they have been sick this may create a bias as for example due to the "120 days" rule in Denmark previously discussed in chapter 1 in this thesis.

The LFS are usually carried out over a particular period, "the reference week", and only absences during that time are counted. This is based upon the proportion of employees who were absent from work due to own illness during the reference week (66). If there are any differences between countries in the use of partial sick leave or other arrangements that ensure that sick people are not 100 percent absent from work, this will make LFS measures for sick leave less comparable. The usual used measures from LFS requires 100 percent absent from job (66). Longer periods of absence may be missed or under-recorded due to the way the LFS are performed. Multiple and recurrent episodes of sickness absence may be difficult to obtain from self-reports as the LFS (144).

Surveys may give more information than register data. However, technical differences between the countries' LFS cannot explain the differences in sick leave observed between Norway and Denmark (7.7% and 4.6%, respectively in 2007) (6). The technicalities could be that holidays and other planned leave are left out, and these are factors that may differ from country to country, or that Norway excludes absence to care for family members, while Poland, for example, specifically includes it.

Register data is often considered to be more reliable than survey data, and the accuracy of register data is assumed to be high. Register data is not time-dependent like surveys can be, for example a survey on sick leave performed in winter will probably show higher sickness absence rates than a survey performed in the summer. The use of register data on sickness absence meant that we could report the mean sickness absence rates during a year. Generally,

register data are designed according to a country's social security system criteria for sickness absence, which can complicate between-country comparisons (26).

Institutional arrangements such as subjects included, design of the sick pay scheme, employment protection policies, and transition from sick pay scheme to other welfare schemes affect how sickness absence is captured in LFS (66). These issues are discussed in this thesis, but their effect on sick leave figures was not analysed systematically.

### **5.3 Trustworthiness**

Trustworthiness of information is of crucial importance in research and it has been argued that the trustworthiness of information is greater when mixed-methods approaches are used (115;117). Internal and external validity are the terms used in quantitative research. Credibility, transferability, and dependability are the terms used by Lincoln and Guba (145) to describe the similar criteria in qualitative research (115). To compile data, methods, and results, the trustworthiness of the data is here considered with similar concepts (e.g. internal validity/credibility) in both disciplines. It could be argued if this is the best way to do it. The validity of qualitative data cannot necessarily be assessed by a checklist to be ticked off, but to a much greater extent by discussing the factors that influence research. However, we have chosen to put the quantitative and qualitative concepts for assessing the quality of the research side by side to make it clear that trustworthiness and quality assessments are made in both quantitative and qualitative methods.

### **5.4 Internal validity (for quantitative studies)/Credibility (for qualitative studies)**

In Papers I and II we used sickness absence data from the municipalities own personnel register which minimised the chance of selection bias. The data included all employees in the health and care sector in each municipality and information on sick leave from day one. Two types of error may affect epidemiological studies: random errors and systematic errors (146;147). In our study, random errors may have occurred in the recording of the dates of each

sick leave episode. Unfortunately, we do not have the possibility to check this. Another term for systematic errors is bias. Bias can refer to an attitude on the part of the investigator, but it is also used to describe any systematic error in the study (146;147). There are different types of bias, including selection bias and information bias. According to Rothman (146), selection bias is a systematic error derived from the procedures used to select subjects and from factors that influence study participation. In our study, selection bias may have occurred due to different registration of the sickness absence of pregnant women in Norway and Denmark. Systematic errors can also arise when the information collected about or from study objects is erroneous.

Differences in definitions may cause challenges. As mentioned previously, sickness absence during pregnancy seems to be registered differently in Norway and Denmark. Pregnant women on sick leave are, to some extent, a part of the regular sickness absence statistic in Norway, while in Denmark they seem to be registered separately.

Information on partial sick leave was only available in the Norwegian data. However, in Paper I we found that if we assumed that 10% of the Norwegians on sick leave had a 50% absence, total absence would be 10.7% among women, which would not have changed the conclusions. Brage (148) showed that 15% of the sickness absence in 2009 in Norway was graded and over half of those graded sick leaves had a degree of 50% (148). The use of partial sick leave seemed to be more common in Norway than in Denmark, and we do not know how this difference affected the overall sickness absence measured in lost work hours or days (5). However, Kann (149) found that graded sick leave was associated with a decrease in sickness absence (149).

Confounding is another central issue in epidemiological studies. Rothman (146) defines confounding as the confusion, or mixing, of effects. This definition implies that the effect of the exposure is mixed with the effect of another variable, leading to a bias, e.g. when a confounder is associated with both the independent and the dependent variable. In our study, the organisation of the work may be a confounder, as well as differences in staffing and competence. In Paper I, we found that there was a higher proportion of nurses employed in the health and care sector in Norway compared to Denmark which could indicate that nurses

and nursing assistants in Norway do more similar tasks than nurses and nursing assistants in Denmark.

In Paper III we sent invitation letters to the municipalities of Kristiansand, Norway and Aarhus, Denmark, and they were responsible for selecting the nursing homes that were included in the study. The administrative leaders of the nursing homes then selected the focus group participants according to information from the researchers on how the groups should be composed. We based the selection process of whom we wanted to interview on previous studies and preliminary results from Paper I. We do not know if the employees participating in the study are different from those not participating in the study.

There are several techniques for establishing credibility in qualitative studies and these should be developed for and fit the qualitative paradigm (150). Lincoln and Guba (145) recommended several techniques researchers may use to improve the credibility of their studies, such as prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, referential adequacy, and member-checking (145).

We did not do any prolonged field work; being present at the study site for a long time was not an option for us. However, we believe we explored details about sickness absence and sickness presenteeism enough to explore what was important and what was irrelevant and could focus on the most relevant aspects discussed in the FGD, which may be equivalent to persistent observation (145), though limited to an interview situation. We noticed after some FDGs that the themes the participants brought up were similar across groups and we believe we covered the most important themes in relation to the purpose of the study.

Triangulation is the verification of findings through referring to multiple sources of information (including literature), using multiple methods of data collection, and often acquiring observations from several researchers. All three forms of triangulation are not required for every conclusion (145). Our findings were triangulated by the researchers that took part in different stages of the analysis process and critically discussing the findings with each other. In our study there were two researchers conducting eight semi-structured FDGs in four nursing homes; two in Norway and two in Denmark. Two FDGs were conducted in

each nursing home, and the four nursing homes had different geographic locations, with one in a rural area and one in an urban area in both Norway and Denmark. One researcher was from Norway and one researcher was from Denmark. The Norwegian researcher was the moderator in the FGDs in Norway, and the Danish researcher was the assistant moderator, and their roles were reversed in the FGDs in Denmark. The interviews were performed in Norwegian and Danish according to country. A semi-structured interview guide was used in both countries and was prepared by both researchers and supervisors.

Peer debriefing, which is related to researcher triangulation, implies meetings by the researchers who conducted the study with a peer who asks probing questions but did not participate in the setting where the study was being conducted. Negative case analysis is an analytical procedure that is meant to refine conclusions until one can “account for all known cases without exceptions” (145). In our study we planned and developed a 3-day workshop for selected authors (see section 3) to explore and validate coding and inferences and to substantiate the interpretation of data. One of the researchers was not part of the design of the interview guide, but assisted in the coding. Another of the researchers performed the FGDs in Denmark, but had not been part of the coding process until the workshop. The last researcher had taken part in all steps. In this way, all represented different critical positions towards validity.

The aim of the workshop was to discuss and agree on the framework, index, and the interpretation of the perspectives. An initial coding framework was developed from the topics in the semi-structured interview guide using Framework Analysis. To identify the main themes, we used familiarisation and developed a thematic framework. We then used an indexing process when transferring the data into the thematic framework. Data was lifted from its original context and a chart containing the different dimensions of the index items was developed to create a picture of the data. Finally, we interpreted the perspectives as a whole, their explanatory content and the relationship between emerging themes and the specified attitudes and reflections on sickness absence. We think that by doing this, both peer debriefing and negative case analysis were considered in this study. We did not find any negative cases.

Progressive subjectivity checks involve archiving the researchers changing expectations for the study; the researcher should not find only what he or she expected to find. In our study we had a semi-structured interview guide; during the data interpretation and analysis we found themes we did not ask about in the interviews such as situational patterns of moral relationship at the workplace. Folk perspectives of the participants should be highlighted in a way that makes it clear that something about the viewpoints held by participants was discovered. We got a lot of information concerning attitudes towards sickness absence and sickness presenteeism, which was the main objective of the study. We did not do member-checking for practical reasons, such as time and availability, and because it was difficult to distinguish between the participants in the FGDs.

Researchers may be biased in their attitudes towards sickness absence and the workplace. We tried to minimise this in our study by having two researchers performing FGDs and by being open-minded towards the participants and the issues they raised.

### **5.5 External validity (for quantitative studies)/Transferability (for qualitative studies)**

External validity refers to the generalisability of results and applicability to other populations. The selection criterion for participation in this study was to be employed in the health and care sector of the municipality of Kristiansand, Norway or Aarhus, Denmark. We measured the whole population and did not estimate, so there were no elements of uncertainty that had to be tested. We found a sickness absence rate of 11.9% in 2004 and 11.6% in 2008 in Kristiansand, Norway. The corresponding numbers in Denmark were 7.1% and 8.4%. These are consistent with national sick leave trends for Norway and Denmark, though at lower levels. In Norway, national sick leave rates for female employees in the health and care sector are stable, with 10.2% reported in 2004 and 10.3% in 2008 (64). However, we found an increase in sickness absence rates for young employees. In Denmark, national sickness absence rates for female employees in general showed an increase from 3.9% in 2004 to 4.3% in 2008, and also here we found an increase in young employees (63).

The inter-personal causal explanations of sickness absence, i.e. how one colleague assesses another colleague's sickness absence, may be applicable to other settings. Our main points in the qualitative study suggested that the moral dimensions and job identity may be applicable in other settings. In addition, the point that inter-relational assessment takes place and is significant for sickness absence may in itself be transferable to other work settings, because inter-relational assessments are likely to occur at most workplaces. In spite of this, the health and care sector is special because of the work tasks performed, and this probably affects whether employees report sick or not. The work tasks in a nursing home are mainly to take care of people; the work tasks are fixed and there is little flexibility. This will affect the transferability of our findings to other jobs with more flexibility. Furthermore, the type of work at a nursing home cannot be postponed or done at home. In other words, context and setting is important and may limit the applicability of our results. Nevertheless, in workplaces with similar context our study results may be transferable. Our main points in Paper III about moral dimensions and job identity that affect sickness absence and presenteeism are aspects that may be common in other workplaces as well and thus may be transferable.

Geographical differences in sickness absence rates have been observed both within Norway and within Denmark (151;152). We have performed two comparative studies between health and care employees in the municipalities of Kristiansand, Norway and Aarhus, Denmark. We cannot rule out the possibility that results would be different if the study was performed in other municipalities. However, national figures support our results (151;152).

#### **5.6 Reliability (for quantitative studies)/Dependability (for qualitative studies)**

Both Norway and Denmark have a tradition of substantially good registers. In Papers I and II we used register data from municipalities, the reliability of which is assumed to be high. Moreover, register data are considered a more objective measurement than, for example, self-reported data (1). In the municipality of Kristiansand we know that the registration of short-term sickness absence for leaders in 2004 was not systematic (28). A study from Denmark showed that a Danish national register on sickness benefit (DREAM) offered valid measures of sick leave episodes of at least 15 days among eldercare employees (153).

There may be errors in the registration, but unfortunately we did not have the possibility to check it.

Other possible misclassifications may be the length of employment, the extent of positions, i.e. how many positions there are overall at the work place, how many positions for nurses'/nursing assistants, part-time positions etc., and possible lack of registration of short-term sickness absence.

In Paper III, to determine whether the results were replicable, we could have brought in other researchers to code the data or to check if the code created suited the material. However, because of the use of several researchers from both Norway and Denmark throughout the study process, we expected the findings to be replicable if other researchers were to check the codes and the material (115).

## **5.7 Strengths and limitations**

One of the main strengths in this thesis is the use of employee register data from two municipalities, which provided a detailed comparison of sickness absence rates and sick leave episodes and length. We have information on sick leave from day one in both countries, which is quite unique. Individual-level data were used, and we harmonised the variables and definitions to make the datasets as precise as possible to ensure comparability.

Another strength of this thesis is the use of a qualitative method, where data is based on the participants own (categories of) meaning in the FGDs (116). Qualitative methods are useful for describing complex phenomena (116) and the FGDs provided understanding and description of the employees' group attitudes and reflections towards sickness absence and sickness presenteeism. This study combined researchers from both Norway and Denmark. Two researchers, one from Norway and one from Denmark, both took part in all FGDs in both countries and three researchers took part in the analysis process to ensure the trustworthiness of the results and the whole study (115). The rest of the authors contributed to the planning and discussion.



There are also limitations to the study. Differences in definitions and registrations may cause challenges, as previously described. However, we have reason to believe that any lack of registration that was not accounted for is random and approximately equal in both countries. We do not believe there are any systematic errors with respect to different groups (i.e. age-groups, gender, etc.) in the registration of sickness absence, except for the possible different registration of pregnant women. The possibility of missing registration of partial sick leave may constitute a systematic error, but unfortunately we do not have the possibility to check this.

The results from FGDs may be more easily influenced by the researcher's personal biases and idiosyncrasies, but we tried to limit this by including three researchers in the analysis and interpretation of the data. We also tried to limit possible language and cultural limitations by creating a team of Norwegians and Danish researchers. The FGDs were transcribed into Norwegian or Danish, depending on the country in which they were performed, and the citations in Paper III were translated by a certified translator in order to minimise eventual misunderstandings. We planned to have focus groups with 4-6 participants each, but some ended up having fewer participants due to difficulties having enough participants in a busy work day and due to sickness absence. We do not know if those who participated in the FGDs are different from those who did not participate, but we have no reason to believe that this is the case. We had the impression that the administrative leaders who chose the focus group participants made their choices for mostly practical reasons. We scheduled the FGDs at the nursing homes in the daytime, and the practical work in the nursing home still had to be done despite the participation of several employees in the FGDs. Administrative leaders had to plan for this and avoid days on which specific tasks would require all personnel; e.g. we did not come on the day that residents were to be bathed.



## **6. DISCUSSION OF MAIN RESULTS**

To our knowledge this is the first study concerning sick leave patterns at an individual level with comparable information on sick leave from day one comparing Norway and Denmark. The harmonisation of the variables and definitions used in the study makes the dataset more accurate in measuring sickness absence rates, length, and number of sick leave episodes. The FGDs were performed in similar settings in Norway and Denmark with the same semi-structured interview guide which provided comparable data.

### **6.1 Main results**

The main results are discussed in detail in Papers I, II, and III. In this section, the discussion will concentrate on our main findings compared to other findings in the literature, possible explanations and understandings of sickness absence and sickness presenteeism, brief coherence between the quantitative studies and the qualitative study, and general considerations for interpreting the results. The methodological discussions revealed some limitations which should be considered when interpreting the findings.

### **6.2 Sickness absence rate and number of sick leave episodes (Paper I)**

In Paper I we found that the sickness absence rates were substantially higher in Norway than in Denmark across all age-groups. National sickness absence numbers in Norway varied from 7.1% in 2004 to 7.0% in 2008, and in national health and care sector it varied from 9.5% in 2004 to 9.6% in 2008. In our study we found sickness absence rates varying from 11.9% in 2004 to 11.6% in 2008 in Norway. In Denmark national sickness absence numbers varied from 3.2% in 2004 to 3.5% in 2008, and in national health and care sector it were 4.7% in 2007 and 5.3% in 2008 which were the only numbers available. In our study we found sickness absence rates varying from 7.1% in 2004 to 8.4% in 2008.

In Denmark there is a larger variation in sickness absence rates between state and municipal sector compared with Norway. State and municipalities belong to the public sector in both countries and the conditions, rules and regulations, are similar respectively. However, workplaces and workloads and thus the risk of sickness absence will be different as kindergarten, primary schools and health and care sectors are located under the municipalities, and these three sectors have high sickness absence. Due to similar organization and conditions, explanations will be like for both Denmark and Norway, but municipalities in Denmark bear larger economical responsibilities for sickness absence than in Norway. Also the employers' period is longer in Denmark than in Norway (it was 14 days in Denmark, extended to 21 days in 2008 while it is 16 days in Norway). Further, the protection against dismissal for employees is better in Norway, especially when sick listed. Both the different economic situation and the different risk for being fired could be incentives to keep sickness absence rates low.

### ***6.2.1 Sickness benefit policies***

Regulations concerning job security are different in Norway and Denmark as described in the introduction (32). In Norway employees are strongly protected against losing their job, including when they are on sick leave. Employees in Denmark have weaker protection (38;40) and may lose their job during a sickness absence. This might influence sickness absence rates, as if you are afraid of losing your job you will probably try to go to work even when feeling sick (39). However, given the regulations, this assumption is likely to apply more strongly in Denmark than in Norway. It might lead to a more frequent short-term absence and prevent long-term absence.

In the NOU 2000:27 (154), which laid the foundation for expanded self-certification for IA enterprises, it is referred to experiments with extended self-certification. The NOU (154) refers to research showing that extended self-certification is one of several initiatives that may seem to be absence preventive. In the self-certification experiment in Kristiansand the employees expressed that expanded self-certification increased the opportunity to safeguarding their own health (155). It was observed increased number of short-term absence of stable absence level in the employers' period and a decline in long-term absence which fits

with the hypothesis (28). The results from the self-certification experiment in Kristiansand corresponds with the research referred to in the NOU (154), but it is of course not any proof of a causal connection. The Danish absence pattern with higher short-term absence than in Norway, but with less long-term absence (Paper I), can be an argument for a hypothesis of more frequent short-term absence may prevent long-term absence, but there is no proven correlation.

We found that mean number of sick leave episodes were slightly higher in Denmark (2.4) than in Norway (2.3), with the highest mean number of sick leave episodes in young employees in Denmark (3.3) (Table 1, Paper I). We found that the frequency of short-term absence (<10%) was higher in Denmark (66.5%) than in Norway (49.9%) in all age-groups (Table 2, Paper I). The long-term sickness absence over 50% in Norway was almost twice that in Denmark (6.6% and 3.7%, respectively). These differences between Norway and Denmark were present not only in the level of sickness absence, but also in the patterns of sickness absence.

### ***6.2.2 Sickness absence and age***

Previous studies have shown variation in sickness absence by age (66;87;156). Older employees tended to have more sickness absence than younger employees (26). Larger age differences in sickness absence rates between younger and older employees were shown in Norway compared to Denmark. In Norway the sickness absence rates increased with age, while in Denmark it decreased in the age-group 60-67 years compared to the previous age-group (66).

In our study we found that the sickness absence rates in both Norway and Denmark were higher in the younger age-groups compared to the elderly age-groups (Table 1, Paper I). This increase in sickness absence rates in young employees is consistent with sickness absence patterns in Italy. However, in the Netherlands, sickness absence rates among young employees decreased (6). The lower sickness absence rates in elderly employees might be due to a healthy worker effect, i.e. the healthiest employees stay at work and sicker

employees may be selected to disability pensions, be otherwise out of work, or be under another welfare scheme.

The decrease in sickness absence rate in Norway, the increase in Denmark, and the frequency of sick leave episodes may be an indication that in time there will be generations in Denmark who will have sickness absence levels more equal to those in Norway.

### ***6.2.3 Transition to other welfare schemes and age***

In the Danish system, flex jobs and "efterløn" has probably had an effect on the sickness absence rate, especially among elderly employees (157). This might be a way to leave working life when one's health situation is not as good as it was, and sickness absence could have been the alternative. According to Bjørngaard (14), before the 1998 scheme of early retirement pension (AFP), disability pension was the only opportunity for some people to have a secured income before pension age. In these cases, a long sickness absence period would usually precede a disability pension, which could have an influence on the sickness absence rates in general, and especially among elderly employees. There is no similar scheme in Denmark. Kaltenbrunner (158) found an increasing trend of young adults, aged 19-29, on disability benefits in both Denmark and Norway (158).

In our study we found higher sickness absence rates in the age-group 60-67 years in Norway (10.8%) compared to Denmark (6.5%) (Table 1, Paper I).

This might indicate that the differences in sickness absence rate in older age-groups between Norway and Denmark is not necessarily an expression of more ill health in Norway, but an example of how different structural systems might influence sickness absence rates. We have no evidence in our data to confirm this, but it might be a part of the explanation of the differences in absence rates in elderly employees.

#### ***6.2.4 Sickness absence and percentage of employment***

Ose (159) described sickness absence among nursing staff in the elderly care sector. All the case municipalities focused on unwanted part-time and reduced use of positions with a small percentage of employment. The main problem according to the municipalities was that increased percentage of employment entailed more frequent weekend work, something most employees did not want. In our study we did not have information on work schedules ("turnus"), but working every other weekend seemed more common in Denmark. In Norway, the work schedules often included work every third weekend, and there was resentment among employees who worked more frequently in the weekends (159).

In our study, one major difference between Norway and Denmark was the distribution of workload. The difference in the proportion of employees with a small percentage of employment in the two countries was large. In Norway, a large proportion of the workforce had a small percentage of employment (46.8% has less than 70% employment). In Denmark this was the case for only a small proportion of the workforce (3.7% has less than 70% employment); a major part of the workforce had approximately 75% to 80% (Table 1, Paper I). However, we did not find that employees with small percentages of employment had higher sickness absence rates compared with employees with 70% to 99.9% employment.

#### ***6.2.5 Sickness absence and occupation***

The explanatory value of occupational group is limited by the fact that generalisation of findings from one country to another can be problematic: work content, working conditions and work organisation might have very specific characteristics for an occupation in one country, but different characteristics in the 'same' occupation in another country (35). We chose to compare the health and care sector because it is similar across countries and the work tasks performed are similar.

We found higher proportions of nurses in Norway (32.0%) compared to Denmark (10.3%), and a higher proportion of nursing assistants in Denmark (68.5%) compared to Norway (35.3%)

(Table 1, Paper I). This may indicate an unequal distribution of education, skills, and tasks between nurses and nursing assistants in Norway compared with Denmark. This could also indicate that nurses in Norway participate more in patient care, and have work tasks that are more similar to those of nursing assistants in Norway, compared with the Danish nurses. Nurses in Norway had more than twice the sickness absence rates of nurses in Denmark (11.5% and 5.3%, respectively). The assumption of similar work tasks among nurses and nursing assistants in Norway could be one possible explanation of the higher sickness absence rates in nurses in Norway compared to nurses in Denmark.

### **6.3 Sickness absence patterns and trends (Paper II)**

In Paper II we found an overall increasing trend in sickness absence rates in Denmark (Table 1, Paper II) from 2004 to 2008, while in Norway the sickness absence rate was stable during the same period. A significant increase in sickness absence rates, however, was found in young employees in both countries (Table 1, Paper II).

We also have to take into consideration sickness benefit policies, age, other welfare schemes and unemployment rates as described earlier when interpreting the results.

Our results are in accordance with those of EWCO (68), which reported a decrease in the total level of sickness absence in all age-groups between 2003 and 2008 in Norway (64). For Denmark, EWCO (69) reported a slightly increasing trend of sickness absence between 2003 and 2008 (63), which is also in accordance with our results. The increase in overall absence level in Denmark is largely driven by a slow but steady increase in long-term absences (2).

#### ***6.3.1 Hypotheses to explain differences in sickness absence***

In Denmark, the sickness absence rate increased until 2007 while the unemployment rate decreased from 2004 to 2008 (63;157). The disciplinary effects hypothesis may explain the relationship between sickness absence and unemployment when the sickness absence rate



is low and the unemployment rate is high and vice versa. As described earlier, job security is weaker in Denmark than in Norway, and the unemployment rate is higher in Denmark compared to Norway. Thus it could be hypothesised that the disciplinary effects hypothesis holds a stronger position in Denmark due to decreased unemployment rates until 2008. Our study showed an increased sickness absence rate in Denmark. However, sickness absence rates have decreased from 2008 until 2011, and increased after that and the unemployment rates have increased from 2008 until 2013. The seemingly reduced strength of the relationship is not explained by the disciplinary effects hypothesis and explanations should be sought elsewhere.

The largest overall increase in sick leave episodes was found in Norway, from 1.8 episodes in 2004 to 2.3 episodes in 2008 (Table 2, Paper II). In both Norway and Denmark, the largest increases in sick leave episodes were observed among the youngest employees.

These results indicate that the two countries are converging in regard to sickness absence measured as rates and episodes.

#### **6.4 Attitudes towards sickness absence and sickness presenteeism (Paper III)**

In Paper III we found that attitudes and relational dimensions had an important influence on sickness absence and sickness presenteeism in nursing home employees in both Norway and Denmark.

The demand-control hypothesis explains that positions with high demands and low influence can lead to stress and dissatisfaction, with consequent increased risk of sickness absence (106). Other studies have found that employees in the health and care sector experience high job pressure, job attachment, and few possibilities to influence their work (159). These factors are known to influence the work environment and the sickness absence rate. Socioeconomic factors and psychosocial work environment also have impact on sickness absence. Social support has also been included in the hypothesis, and support from colleagues and management is considered to counteract the negative effects of high demands and low

control. One study found that women and young employees more often report that they do not want to burden their colleagues (160).

The findings from these studies support our findings. We found that the perception of colleagues and management as to what constituted acceptable and non-acceptable reasons for sickness absence were important aspects of practicing social control in the workplace, and the reasons were the same in both countries apart from small differences between employees in urban and rural areas in both countries. The psychosocial work environment was indirectly discussed through topics such as acceptable causes for sickness absence, job identity, and organisation of work. The general interpretation of the findings was that attitudes towards sickness absence and sickness presenteeism among nursing home employees were embedded in situational patterns of moral relationships and were connected to a specific job identity independent of country.

Data from focus group discussions stem from group interactions (127). These interactions influence the content of what is discussed and said, and the content affects the group interactions as well (127). Lehoux (161) describes different types of interactions among FGD participants and points to the issue of how to “control” the content of the discussion. Further, it is common in FGD to bring together participants that share some common characteristics, but it may not be entirely clear whether the researchers’ definition of homogeneity is compatible with that of the participants (161) – a dimension the researcher must be aware of. Hollander (162) especially emphasises the importance of the social context of FGD, i.e. the relationship between the participants and between the participants and the moderator and the larger social structures within which the discussion takes place and how this “affect the data that are generated in ways that have not yet been widely acknowledged by focus group researchers”.

In our FGD study, we experienced that the questions and topics were discussed and negotiated upon and renegotiated. This was an ongoing process until the participants seemed content (and had said what they felt was important to say). Some of the participants’ voices might have been more evident/apparent than others and may have had a stronger influence on the interaction. Kitzinger (127), citing Dahlgren 1988, that “all talk through which

people generate meaning is contextual, and that the contexts will inevitable somewhat colour the meaning". Further Hollander (162) claims that "the participants in a focus group are not independent of each other, and the data collected from one participant cannot be considered separate from the social context in which it was collected". The social context of the focus groups such as the relationship among the participants and between the participants and the facilitator, and the larger social structures within which the discussion takes place affect the data that are generated in ways that have not yet been widely acknowledged by focus group researchers according to Hollander (162). The social context affects the FGD participants both individually and as a group.

Hollander (162) describes four different types of social context that influence focus groups and their participants; the associational context, the status context, the conversational context and the relational context. All these contexts are overlapping. The associational context is "the common characteristics that brings the participants together (and) influences the group conversation and dynamics" (162). Important for the associational context in our study is that the participants are colleagues and the work place itself, a nursing home. Further, all participants were women (not intended), put in groups according to age and education and both facilitators were women. These dimensions became part of the analysis we did as much as we could justify. There are also some distinct characteristics connected to a nursing home unlike, for example a fabric. The shared tasks and close collaboration and dependency may affect the discussion in several ways and the participants might feel more or less comfortable sharing personal experiences (162). In our study we wanted to study the participants' attitudes in general towards sickness absence and sickness presenteeism and did not ask specifically for their personal experiences with this, although examples of this were provided anyhow. The participants may respond to what they think is expected of them by the moderator and think of eventual future consequences of the FGDs. What is said and what is possible to say is something the researchers should be aware of in their analysis. We believe that because we did not ask explicitly for their personal experience with sickness absence it made it easier for them to talk freely, and the analysis is based on the assumption that a high degree of sincerity was presented. However, social hierarchies if which we were not aware could have influenced the discussions, and could as such be a condition that colours the result.

The next context is the status context which Hollander (1962) defines as “the relative positions of the participants in local or societal status hierarchies, such as workplace, authority, gender, race, age, sexual identity, or social class”. In our study the participants’ educational level was the same: they were nursing assistants in nursing homes in Denmark and Norway, i.e. they had the same educational background and worked at similar working places. This may reduce the possible tension and the influence on the discussions due to educational status differences. However, there were differences among the participants as well: the age of the participants varied from 21 to 66 years old, they were in different phases of their lives; some had no children, some had young children and others had adult children, and the opinions on sickness absence and sickness presenteeism may have differed due to different family stages and backgrounds. Further, some of the participants saw each other outside the working place, and some had children at the same school/kindergarten.

These aspects affected the social interaction among the participants and the analysis showed that although we found shared themes on job identity and moral concerns, the content of these varied according to life situation, i.e. some participants without children questioned the use of “sick children’s day”, others expressed concern for colleagues who had sick children and had to stay at home. These different opinions were often expressed towards a specific colleague, and not necessarily to other colleagues in general. The relationship towards this specific colleague was crucial for the assessment of the colleague. Hence, the analysis of the FGDs pointed to shared themes as well as to within-group differences depending on the participants’ context. This leads us to and is an illustration of the third social context described by Hollander (1962) as the conversational context referring to “those who have more status and power in a conversation tend to contribute with more “successful” topics (topics that are taken up by others in the conversation).

The last context Hollander (1962) describes is the relational context as “the degree of prior acquaintance among the participants” and this refers to the level of intimacy already established among the participants. This is related to the associational context, but at another level. All our FG participants were colleagues so they knew each other, but their social relationship and possible friendship was little known to us. This might have had an impact on the social interaction. The social interaction and the social context in our study

might be affected by the participants in different ways; if you have a colleague who is also a friend you might feel and behave more confident compared to someone who is just a colleague. On the other hand, it might be difficult to put job limits for a colleague who is also a friend. In our study we experienced that some of the participants expressed that they sometimes met outside work and others did not. Some of them had been colleagues for a very long time and others were new to each other. These are aspects that will have an impact on the interaction, although it is difficult to get the full understanding of its significance for interaction if not approaching it specifically as an analytical concern.

Several of the contexts and dimensions that are relevant to explore in order to take into account interaction of an FGD require more than a focus on the discussion. It is extremely relevant to do this, but not many FGD studies succeed doing it although it is decisive for an overall analysis.

Our analysis is a result of the data produced in the interaction and discussions among the participants in our FGD, trying to consider some of the basic social contexts for interaction. Retrospectively, we realize that we could have analysed even more thoroughly the interaction that formed the basis for the dataset.

#### ***6.4.1 Job identity, work environment, and employee engagement***

The aspects of work environment, job identity, and employee engagement may contribute to explain some of our findings in the qualitative study and make a useful connection to the quantitative studies.

The participants in our study expressed that job identity, job commitment, and social commitment to their residents was important to them. This might be interpreted/understood as employee engagement and was an important part of the participants' work day.

The attitudes towards sickness absence and sickness presenteeism expressed by the participants in the FGDs were quite similar in both Norway and Denmark. This indicates that

individual-level aspects like employee engagement are important aspects in sickness absence behaviour. We assume that high employee engagement may contribute to lower sickness absence. In the quantitative studies, we found differences in sick leave rates and sick leave episodes. This may be influenced by differences at the structural level, such as differences in legislation, rather than differences at the individual level. In Paper I we found higher sick leave rates in Norway compared to Denmark, and in Paper III we found similar attitudes towards sickness absence and presenteeism. These findings may indicate that the mechanisms behind differences in sick leave rates can be found at a structural level rather than the individual level.

Job stress might influence both sickness absence and sickness presenteeism. Elstad (77) found that with increased levels of job stress, the level of sickness presenteeism rose more sharply than that of sickness absence. The Nordic elderly care sector has been restructured to obtain more efficiency. Sweden, Denmark, Finland and Norway were included in a study by Elstad (77) where employees in the elderly care sector were asked about perceived job stress. Higher job stress was reported among Norwegian care employees than Danish care employees. One study (83) claimed that high levels of sickness presenteeism predict sickness absence.

## **6.5 Generally for all three studies**

### ***6.5.1 Coherence between quantitative studies and qualitative study***

In the results from Paper I, we found that sickness absence rates were higher in young employees. Therefore, we wanted to study young employees versus older employees in the FGDs to explore if there were any differences in attitudes towards sickness absence and presenteeism in these age-groups. We separated the focus groups by age, into employees younger than 40 years old and older than 50 years old. In the statistics, this divide seemed reasonable. However, during the FGDs we realised that this division did not match the daily lives of the employees at the nursing homes. Many employees in their 30s considered

themselves as older in the profession, as they had started to work in the health care sector already early in their 20s. Those who were considered young were employees from 18 years of age to those in their early 20s. The separation we made by age was perceived as artificial. This may be useful knowledge if actions at the workplace against sickness absence should be directed towards specific groups.

In Paper I we showed that percentage of employment was distributed differently in Norway and Denmark; in Norway 46.8% of employees in the health and care sector had less than 70% employment, while the corresponding number in Denmark was 3.7%. Percentage of employment and fair distribution of extra shifts were discussed in the FGDs in Norway, but to a much lesser extent in Denmark, where participants thought they worked enough to manage their daily life expenses. Conversely, several of the participants with a small percentage of employment in Norway needed to work more and had to take on extra shifts to manage their daily life expenses. In Norway, every time someone was sick at work, the management would call for extra help among the already employed staff. The distribution of extra work had to be fair, if not the employees would perceive it as unfair. Employees with a low percentage of employment felt that they had to say yes every time they were asked to work extra, because they needed the money and they did not know when they would be asked again. This situation made it difficult to plan family life and leisure time activities.

This was not the case in Denmark, the employees were thought to be spared working extra, and the management would call for extra help when necessary. Even though our study showed that part-time work was common in both Norway and Denmark, in Denmark the percentage of employment were higher than in Norway (70 %-80% working position were normal) and the employees felt that they were satisfied with their working hours and they could live from their earnings.

The percentage of employment may affect the work environment if extra shifts are not fairly distributed. However, there was not necessarily a consensus on what constituted a fair distribution. This information could be useful for those who make shift schedules as this may affect the work environment and thus the sickness absence.

It is difficult to know if job pressure is higher in Norway compared to Denmark; our data do not contain this information. Therefore, we cannot conclude whether the demand-control hypothesis may explain some of the differences between Norway and Denmark in sickness absence rates.

### **6.5.2 Gender**

The health and care sector is strongly gender-segregated and it has been common knowledge that women have higher sickness absence than men in both Norway and Denmark (63;64). In Paper I we showed that women had higher sickness absence than men in the health and care sector in Kristiansand, Norway and Aarhus, Denmark (the analysis for men is supplementary material in Paper I). This is also the case in many other European countries (2;13). Smeby (99) questioned whether gender divides could be explained by occupation, income, mental distress, and health, but the study did not explain why women have more sickness absence than men, either by work-related factors or by general health or mental distress. Therefore, factors explaining the gender divide should be sought elsewhere.

A study comparing sickness absence in 15 EU countries showed that sickness absence rates were lower in Southern European countries compared with Central and Northern European countries, and in general, slightly higher in men than in women (1). These results reflected working life in general and were not connected to a specific sector (1).

Despite potential limitations, this study is one of the first to provide a scientifically valid description of sickness absence across EU countries. It is interesting that their results showed a slightly higher sickness absence among men than women, which is the opposite of the results in our study.

Due to the highly gender-segregated working life, it is somewhat difficult to really know if the high sickness absence rates are due to women or to the sector. In our study we found that approximately 90% of employees in the health and care sector in Norway and 95% in Denmark were women. Between 2004 and 2008 there was a small increase in men working



in the health and care sector in both countries. However, in our data we have no information about which positions these men held. Other studies have indicated that men in the health and care sector often hold leadership positions, and thus participate in the care only to a limited extent.

In a Norwegian Official Report (4) it could be understood that if women made up a high proportion of employees at a workplace, gender could explain why sickness absence was high. In the health and care sector the proportion of women is high, as are the sickness absence rates. The analysis performed by Ose (159) showed that men in the health and care sector had significantly higher sickness absence than men in other sectors. This indicated that sickness absence in this sector was also due to factors connected to the workplace. It is possible there are factors in the work itself that contribute to high sick leave rates in this sector.

We do not fully know the reasons for the gender differences in sickness absence rates. Two studies from Norway (57;99) suggest that employment, working conditions, and income do not explain a significant portion of this gender gap. However, it is uncertain whether these variables capture the differences in actual job content to a sufficient extent. This is a dimension that should be examined more closely with other methods. However, statistics show that women have higher sickness absence than men in all sectors and industries (63;64). A natural reason could be differences related to biology and anatomy, with women having more complex reproductive systems than men (159). It could also be due to differences in priorities for work and family, different thresholds for how well/healthy one should be to do a good job, different ways to manage/cope with different types of loads, etc. Even though we know much about the actual differences between women and men in relation to sickness absence, we know little about what the differences are due to and thereby what steps could be taken to prevent sickness absence.

### ***6.5.3 The labour force composition hypothesis***

The labour force composition hypothesis explains increasing sickness absence through changes in the composition of the workforce, which differs in periods of recovery and recession. In times when there is a shortage of labour, it opens the labour market to marginal groups or individuals with impaired or ill health. These vulnerable groups may have higher sickness absence than the average employee.

The workforce in both Norway and Denmark includes a high percentage of women and older employees compared to other countries in Europe, and these groups have traditionally had high sickness absence. Lund (163) found that the higher level of sickness absence in Sweden compared to Denmark could be due to increased retention of employees with health problems in Sweden (compared to Denmark). This might also be the case for Norway compared with Denmark (66). Unfortunately, in our study we did not have any information about the work ability of those within and outside the workforce.

Sickness absence due to pregnancy is registered as a part of the regular sickness absence in Norway. In Denmark this type of absence seems to be registered as a special category of absence that is not included in regular sickness absence. Excluding sickness absence because of pregnancy makes sickness absence rates decrease. This may be a limitation. However, in our studies (Papers I and II) the sickness absence rates was higher in Norway in all age-groups, not only in the age-groups 20-30 years and 30-40 years, the most common ages the be pregnant.

## 7. CONCLUSIONS

There are many factors that may affect the sickness absence, and comparisons between countries should therefore be made with caution. The conclusions to be drawn from the studies presented in this thesis are:

- Sickness absence rates in the health and care sector were higher in Norway compared to Denmark, more employees in Denmark had more frequent, but shorter sick leave episodes compared to Norway, which raise the question whether frequent shorter sick live episodes prevent longer sick leave?
- Young employees aged 20-29 years had higher sickness absence rates and more frequent sick leave episodes than older employees, had the highest increase, and this counted for both Denmark and Norway
- We found an overall increase in sickness absence rates in Denmark, while the largest overall increase in sick leave episodes was found in Norway. The results indicated that the two countries were converging in regard to sickness absence measured as rates and episodes.
- Attitudes towards sickness absence and sickness presenteeism among nursing home employees were embedded in situational patterns of moral relationships and were connected to a specific job identity. These patterns were constituted by the perception of colleagues, the social commitment to residents, and they influence on what was deemed as acceptable and non-acceptable reasons for sickness absence.
- Attitudes towards sickness absence and sickness presenteeism were socially and morally determined at personal levels by an overall concept of work, independent of country.

## 8. FUTURE PERSPECTIVES

Further investigation on sickness absence and sickness presenteeism should be continued at the structural, organisational, and individual levels.

When both the general health of the population and treatment have improved one would expect that the sickness absence and disability pensions should decrease. From a professional concept of disease this should be the case, but sickness absence rates were increasing in Denmark, stable in Norway, and disability pensions were increasing in both countries.

The increase of sickness absence in young employees was considerable and should be studied further.

The relevance of the work environment to sickness absence and exclusion from work is interesting to study further, as are attitudes towards sickness absence. This could be explored with a concept of disease as value-laden and relational, which maybe could contribute with new insight into the phenomenon of sickness absence and sickness presenteeism. Increased sickness absence rates among women compared to men are still unexplained to a large extent; at least there is no consensus on the reason for it. Working life requires less physical strength than was previously the case, and the relationship between illness and work is more complex than before. Maybe an approach and understanding of the concept of disease in addition to the value-neutral concept could be applied to these somehow unexplained factors in sickness absence research.

## 9. REFERENCES

- (1) Gimeno D, Benavides FG, Benach J, Amick BC, III. Distribution of sickness absence in the European Union countries. *Occup Environ Med* 2004;61(10):867-9.
- (2) Organisation for Economic Co-operation and Development. *Sickness, Disability and Work: Breaking the Barriers*. Vol. 3: Denmark, Finland, Ireland and the Netherlands. Paris: OECD; 2008.
- (3) Organisation for Economic Co-operation and Development. *Economic Policy Reforms: Going for Growth 2009*. Paris: OECD; 2009.
- (4) Norges Offentlige Utredninger. [Working for Health. Sickness Absence and Exclusion in the Health Care Sector]. Oslo: Ministry of Health and Care Services; 2010. Norwegian.
- (5) PROBA. Internasjonal sammenlikning av sykefraværet – hovedrapport. Oslo: PROBA Samfunnsanalyse. Available at: <http://www.proba.no/wp-content/uploads/sites/32/2014/06/Rapport-2014-05-Internasjonal-sammenlikning-av-sykefravaer-del-2-PDS-.pdf>; 2014.
- (6) EUROFOND. *Absence from work*. European Foundation for the Improvement of Living and Working Conditions; 2010. Available at: <http://eurofound.europa.eu/observatories/eurwork/comparative-information/absence-from-work>
- (7) Whitaker SC. The management of sickness absence. *Occup Environ Med* 2001;58(6):420-4.
- (8) Hensing G, Alexanderson K, Allebeck P, Bjurulf P. How to measure sickness absence? Literature review and suggestion of five basic measures. *Scand J Soc Med* 1998;26(2):133-44.
- (9) Gimeno D, Bultmann U, Benavides FG, Alexanderson K, Abma FI, Ubalde-Lopez M, et al. Cross-national comparisons of sickness absence systems and statistics: towards common indicators. *Eur J Public Health* 2014;24(4):663-6.
- (10) Bergendorff S. *Sickness absence in Europe -- a comparative study*. Stockholm: National Social Insurance Board; 2003.
- (11) Holmas TH, Dahl SA, Skjeret F. *Attitudes towards sickness absence in Nordic countries*. Bergen: Stein Rokkan Centre for Social Studies; 2008.

- (12) Svensson T, Mussener U, Alexanderson K. Sickness absence, social relations, and self-esteem: a qualitative study of the importance of relationships with family, workmates, and friends among persons initially long-term sickness absent due to back diagnoses. *Work* 2010;37(2):187-97.
- (13) Organisation for Economic Co-operation and Development. Sickness, disability and work, breaking the barriers. A synthesis of findings across OECD countries. Paris: OECD; 2010.
- (14) Bjorngaard JH, Krokstad S, Johnsen R, Karlsen AO, Pape K, Stover M, et al. Epidemiological research on disability benefits in the Nordic countries. *Nor J Epidemiol* 2009;19(2):103-14.
- (15) Organisation for Economic Co-operation and Development. Annual report 2005. Paris: OECD; 2006.
- (16) Pape K, Bjorngaard JH, Westin S, Holmen TL, Krokstad S. Reading and writing difficulties in adolescence and later risk of welfare dependence. A ten year follow-up, the HUNT Study, Norway. *BMC Public Health* 2011;11:718.
- (17) De Ridder KA, Pape K, Johnsen R, Westin S, Holmen TL, Bjorngaard JH. School dropout: a major public health challenge: a 10-year prospective study on medical and non-medical social insurance benefits in young adulthood, the Young-HUNT 1 Study (Norway). *J Epidemiol Community Health* 2012;66(11):995-1000.
- (18) Stover M. Work related risk factors and disability pension in the Nordland Health Study. Doctoral thesis. Trondheim: NTNU; 2013.
- (19) Sund E, Steinar K. Sosiale ulikheter i helse i Norge en kunnskapsoversikt. Oslo: The Norwegian Directorate for Health and Social Affairs; 2005.
- (20) Flora P, Heidenheimer A. The development of welfare states in Europe and America. New Brunswick: Oxford University Press; 1981.
- (21) Esping-Andersen G. The three worlds of welfare capitalism. Princeton: Princeton University Press; 1990.
- (22) Nordic Centre for Welfare and Social Issues. The Nordic welfare model. Nordic Centre for Welfare and Social Issues ; 2012.
- (23) Esping-Andersen G. Why we need a New Welfare State. Oxford: Oxford University Press; 2002.

- (24) Normann T, Ronning E, Norgaard E. Utfordringer for den Nordiske velferdsstaten - sammenlignbare indikatorer. Copenhagen: Nordic Social Statistical Committee. NOSOSCO; 2013.
- (25) Askildsen JE, Bratberg E, Nilsen OA. Unemployment, labor force composition and sickness absence: a panel data study. Health Econ 2005;14(11):1087-101.
- (26) Barmby TA, Ercolani MG, Treble JG. Sickness absence: an international comparison. The Economic Journal 2002;112(F315):F331.
- (27) Livanos I, Zangelidis A. Sickness absence: A Pan-European study. Munich: Munich Personal RePEc Archive; 2010. Available at: <http://mpra.ub.uni-muenchen.de/>.
- (28) Fleten N, Johnsen R. [Project self-certification in Kristiansand municipality]. Trondheim: Department of Community Medicine, University of Tromsø/Department of Public health and General Practice, University of Trondheim; 2005. Norwegian. Available at: <http://evalueringsportalen.no/evaluering/prosjekt-egenmelding-kristiansand-kommune-prosjektleders-evalueringsrapport/2005%20Egenmelding%20evalueringsrapport%20-prosjektleder.pdf/@@inline>.
- (29) Norwegian Labour and Welfare Administration (NAV). Cooperation Agreement on a More Inclusive Working Life; 2014. Available at: <https://www.nav.no/no/Bedrift/Inkluderende+arbeidsliv/Relatert+informasjon/IA-samarbeidsavtale+2014-2018.353477.cms>.
- (30) Fleten N, Krane L, Johnsen R. Extended self-certification -- a step towards more appropriate sickness absence? Nor J Epidemiol 2009;19(2):223-8.
- (31) Brage S, Krohg M, Klockars M, Mikaelsson B, Permin H, Thorlacius S. [Social insurance schemes in Nordic countries]. Tidsskr Nor Laegeforen 2002;122(15):1486-91. Norwegian.
- (32) Brage S. [Trends in the Scandinavian sick leave schemes]. Arbeidogvelferd 2007;2(24):29. Norwegian.
- (33) NOSOSCO. Sickness absence in the Nordic Countries. Copenhagen: Nordic Social Statistical Committee, NOSOSCO; 2015.

- (34) Tveito TH, Halvorsen A, Lauvalien JV, et al. Room for everyone in working life? 10% of the employees – 82% of the sickness leave. *Norsk Epidemiologi* 2002;12:63-8.
- (35) Labriola M, Holte KA, Christensen KB, Feveile H, Alexanderson K, Lund T. The attribution of work environment in explaining gender differences in long-term sickness absence: results from the prospective DREAM study. *Occup Environ Med* 2011;68(9):703-5.
- (36) Brage S, Kann IC, Thune O. Er det slik at få individer står for det meste av sykefraværet? *Arbeid og velferd* 3/2013; 2013 Norwegian.
- (37) Lund T, Labriola M. Sickness absence in Denmark - research, results, and reflections. *Scandinavian Journal of Work Environment and Health Supplements* 2009;7(5):14.
- (38) Naz G. Comparative data of absence due to sickness in Nordic countries. Working paper No. 10/03. Bergen: Institute for Research in Economics and Business Administration; 2003.
- (39) Blekesaune M. Job insecurity and sickness absence: correlations between attrition and absence in 36 occupational groups. *Scand J Public Health* 2012;40(7):668-73.
- (40) Becker U. The Scandinavian model: still an example for Europe? In: Agarwal NK, Srinivasan MI editors. *Economic development strategies: Concepts and experiences*. Hyderabad: Icfai University Press; 2009.
- (41) Bonato L, Lusinyan L. Work absence in Europe. IMF Working Paper; 2004. Available at: <https://www.imf.org/external/pubs/ft/wp/2004/wp04193.pdf>.
- (42) Organisation for Economic Co-operation and Development. Detailed description of employment protection in OECD and selected non-OECD countries. Paris: OECD; 2008.
- (43) Organisation for Economic Co-operation and Development. *Health at a glance*. Paris: OECD; 2013.
- (44) Organisation for Economic Co-operation and Development. *Human resources Management Country Profile. Norway*. Paris: OECD; 2013.
- (45) Organisation for Economic Co-operation and Development. *Human resources Management Country Profile. Denmark*. Paris: OECD; 2013.



- (46) Solli HM. Helse-, sykdoms- og arbeidsevnebegreper I den nye arbeids- og velferdsetaten i Norge. Socialmedicinsk tidsskrift. Volume 6; 2009. Norwegian.
- (47) Solli HM. Ability-based notions of health and disease in the Norwegian social security system. Tidsskr Nor Legeforen 2011;131:1097-9.
- (48) Dodier N. Social uses of illness at the workplace: sick leave and moral evaluation. Soc Sci Med 1985;20(2):123-8.
- (49) Buck R, Porteous C, Wynne-Jones G, Marsh K, Phillips CJ, Main CJ. Challenges to remaining at work with common health problems: what helps and what influence do organisational policies have? J Occup Rehabil 2011;21(4):501-12.
- (50) Barnes MC, Buck R, Williams G, Webb K, Aylward M. Beliefs about common health problems and work: a qualitative study. Soc Sci Med 2008;67(4):657-65.
- (51) The Directorate of Labour. [Report on the Labour Market]; 2006. Norwegian. Available at: <file:///homer.uit.no/lkr000/My%20Documents/nr1%202006.pdf>.
- (52) Taylor PJ. Some international trends in sickness absence 1950-68. Br Med J 1969;4(5685):705-7.
- (53) Gjesdal S. [Sickness absence incidence in Norway 1975-2002]. Tidsskr Nor Laegeforen 2005;125(6):742-5. Norwegian.
- (54) Ose S. [Knowledge of sickness absence: New Norwegian contributions]. Trondheim : Sintef Helse; 2010. Norwegian.
- (55) World Health Organization. World Health Report. Geneva: World Health Organization; 2010.
- (56) Markussen S. Trade-offs between health and absenteeism in welfare states: striking the balance. Oslo: University of Oslo; 2007.
- (57) Markussen S, Roed K, Rogeberg OJ, Gaure S. The anatomy of absenteeism. IZA Discussion Papers, No. 4240; 2009 Available at: <http://nbn-resolving.de/urn:nbn:de:101:1-20090622281>.
- (58) Buzzard RB, Shaw WJ. An analysis of absence under a scheme of paid sick leave. Br J Ind Med 1952;9(4):282-95.
- (59) Barmby TA, Orme CD, Treble JG. Worker absenteeism: An analysis using microdata. The Economic Journal 1991;101(405):214-29.

- (60) Fleten N, Johnsen R, Forde OH. Length of sick leave - why not ask the sick-listed? Sick-listed individuals predict their length of sick leave more accurately than professionals. BMC Public Health 2004;4:46.
- (61) Mackenbach JP, McKee M. A comparative analysis of health policy performance in 43 European countries. Eur J Public Health 2013;23(2):195-201.
- (62) The Nordic Council of Ministers. Nordic statistical yearbook 2012. Copenhagen: The Nordic Council of Ministers; 2012.
- (63) Statistics Denmark. Statistics Denmark 2013; <http://statistikbanken.dk/FRA05> (accessed February 2013).
- (64) Statistics Norway. Statistics Norway 2013; <http://statbank.ssb.no/statistikkbanken> (accessed February 2013).
- (65) European Commission. Eurostat homepage. Available at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home2014>.
- (66) Berge C. [International comparisons of sickness absence]. Økonomiske analyser; 2012. Norwegian.
- (67) Johansen K, Bihmann K, Mikkelsen S, Lyng E. Trends in sickness absence in Denmark. Scand J Work Environ Health 2009;35(5):334-41.
- (68) European Working Conditions Observatory. Absence from work - Norway; 2010.
- (69) European Working Conditions Observatory. Absence from work - Denmark; 2010.
- (70) Kausto J, Miranda H, Martimo KP, Viikari-Juntura E. Partial sick leave--review of its use, effects and feasibility in the Nordic countries. Scand J Work Environ Health 2008;34(4):239-49.
- (71) Lie SA. Sykmelding, grader sykmelding og forløpet tilbake til jobb. Gjentatte overganger mellom full sykmelding, gradert sykmelding og jobb for 283296 personer fra 2002 til 2010. Sluttrapport til FARVE. Oslo; 2010. Norwegian.
- (72) Nossen JP. Sickness absence and the economic cycle: A review. Nor J Epidemiol 2009;19(2):115-25.
- (73) Shapiro C, Stiglitz JE. Equilibrium unemployment as a worker discipline device. The American Economic Review 1984;74(3):433-44.
- (74) Aronsson G, Gustafsson K, Dallner M. Sick but yet at work. An empirical study of sickness presenteeism. J Epidemiol Community Health 2000;54(7):502-9.

- (75) Johns G. Presenteeism in the workplace: A review and research agenda. *Journal of Organizational Behavior* 2010;31(4):519-42.
- (76) Hansen CD, Andersen JH. Going ill to work--what personal circumstances, attitudes and work-related factors are associated with sickness presenteeism? *Soc Sci Med* 2008;67(6):956-64.
- (77) Elstad JI, Vabø M. Job stress, sickness absence and sickness presenteeism in Nordic elderly care. *Scand J Public Health* 2008;36(5):467-74.
- (78) Aronsson G, Gustafsson K. Sickness presenteeism: prevalence, attendance-pressure factors, and an outline of a model for research. *J Occup Environ Med* 2005;47(9):958-66.
- (79) Jena AB, Baldwin DC, Jr., Daugherty SR, Meltzer DO, Arora VM. Presenteeism among resident physicians. *JAMA* 2010;304(11):1166-8.
- (80) Johansson G, Lundberg I. Adjustment latitude and attendance requirements as determinants of sickness absence or attendance. Empirical tests of the illness flexibility model. *Soc Sci Med* 2004;58(10):1857-68.
- (81) Gustafsson K, Marklund S. Consequences of sickness presence and sickness absence on health and work ability: a Swedish prospective cohort study. *Int J Occup Med Environ Health* 2011;24(2):153-65.
- (82) Bergström G, Bodin L, Hagberg J, Lindh T, Aronsson G, Josephson M. Does sickness presenteeism have an impact on future general health? *Int Arch Occup Environ Health* 2009;82(10):1179-90.
- (83) Taloyan M, Aronsson G, Leineweber C, Magnusson HL, Alexanderson K, Westerlund H. Sickness presenteeism predicts suboptimal self-rated health and sickness absence: a nationally representative study of the Swedish working population. *PLoS One* 2012;7(9):e44721.
- (84) Leineweber C, Westerlund H, Hagberg J, Svedberg P, Alexanderson K. Sickness presenteeism is more than an alternative to sickness absence: results from the population-based SLOSH study. *Int Arch Occup Environ Health* 2012;85(8):905-14.
- (85) Bockerman P, Laukkanen E. What makes you work while you are sick? Evidence from a survey of workers. *Eur J Public Health* 2010;20(1):43-6.

- (86) Wynne-Jones G, Buck R, Porteous C, Cooper L, Button LA, Main CJ et al. What happens to work if you're unwell? Beliefs and attitudes of managers and employees with musculoskeletal pain in a public sector setting. *J Occup Rehabil* 2011;21(1):31-42.
- (87) Rhodes S. Age-related differences in work attitudes and behavior: A review and conceptual analysis. *Psychological Bulletin* 1983;93(2):328-67.
- (88) Dahl SA, Holmas TH, Skjeret FA, Kjerstad E. En kartlegging av holdninger til sykefravær i Norden. Research report. Bergen: Institute for Research in Economics and Business Administration, Norges Handelshøyskole; 2008. Norwegian.
- (89) Hansson M, Boström C, Harms-Ringdahl K. Sickness absence and sickness attendance--what people with neck or back pain think. *Soc Sci Med* 2006;62(9):2183-95.
- (90) Allebeck P, Mastekaasa A. Swedish Council on Technology Assessment in Health Care (SBU). Chapter 5. Risk factors for sick leave - general studies. *Scand J Public Health Suppl* 2004;63:49-108.
- (91) Saks AM. Antecedents and consequences of employee engagement. *Managerial Psychology* 2006;21(7):600-19.
- (92) Organisation for Economic Co-operation and Development. Mental health and work. Paris: OECD; 2013.
- (93) Ihlebaek C, Brage S, Natvig B, Bruusgaard D. [Occurrence of musculoskeletal disorders in Norway]. *Tidsskr Nor Laegeforen* 2010;130(23):2365-8. Norwegian.
- (94) Ose S, Jiang L, Bungum B. Det kjønnsdelte arbeidsmarkedet og kvinners arbeidshelse. Trondheim : Sintef Helse; 2014. Norwegian.
- (95) Mastekaasa A. Parenthood, gender and sickness absence. *Soc Sci Med* 2000;50(12):1827-42.
- (96) Forthun I. Dobbeltarbeidshypotesen - gir omsorg for barn økt sykefravær blant yrkesaktive kvinner? Master Thesis, The University of Bergen; 2011. Norwegian
- (97) Bekker MH, Rutte CG, van RK. Sickness absence: A gender-focused review. *Psychol Health Med* 2009;14(4):405-18.

- (98) Kristensen P, Bjerkedal T. Gender differences and social gradients in sickness absence 2000-03 among Norwegians born 1967-76. *Nor J Epidemiol* 2009;19(2):179-91.
- (99) Smeby L, Bruusgaard D, Claussen B. Sickness absence: could gender divide be explained by occupation, income, mental distress and health? *Scand J Public Health* 2009;37(7):674-81.
- (100) Laaksonen M, Mastekaasa A, Martikainen P, Rahkonen O, Piha K, Lahelma E. Gender differences in sickness absence--the contribution of occupation and workplace. *Scand J Work Environ Health* 2010;36(5):394-403.
- (101) Hill J, Trist E. Temporary withdrawal from work under full employment. *Human Relations* 1955;8(121):152.
- (102) Moreau M, Valente F, Mak R, Pelfrene E, de SP, De BG, et al. Occupational stress and incidence of sick leave in the Belgian workforce: the Belstress study. *J Epidemiol Community Health* 2004;58(6):507-16.
- (103) Wickstrom GJ, Pentti J. Occupational factors affecting sick leave attributed to low-back pain. *Scand J Work Environ Health* 1998;24(2):145-52.
- (104) Siegrist J. Adverse health effects of high-effort/low-reward conditions. *J Occup Health Psychol* 1996;1(1):27-41.
- (105) Mehlum IS. How much sick leave is work-related? *Tidsskr Nor Laegeforen* 2011;131(2):122-5.
- (106) Karasek RA. Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly* 1979;24(2):285-308.
- (107) Landsbergis PA. Occupational stress among health care workers: A test of the job-demand-control model. *Journal of Organizational Behavior* 1998;9(3):217-39.
- (108) Aagestad C, Johannessen HA, Tynes T, Gravseth HM, Sterud T. Work-related psychosocial risk factors for long-term sick leave: a prospective study of the general working population in Norway. *J Occup Environ Med* 2014;56(8):787-93.
- (109) Nielsen ML, Kristensen TS, Smith-Hansen L. The Intervention Project on Absence and Well-being (IPAW): Design and results from the baseline of a 5-year study. *Work and Stress* 2002;16(191):206.

- (110) Sterud T. Work-related mechanical risk factors for long-term sick leave: a prospective study of the general working population in Norway. *Eur J Public Health* 2014;24(1):111-6.
- (111) Macey WH, Schneider B. The meaning of employee engagement. *Industrial and Organizational Psychology* 2008;1:3-30.
- (112) Tashakkori A, Creswell JW. Mixed methodology across disciplines. *Journal of Mixed Methods Research* 2008;2(1):1-5.
- (113) Tashakkori A, Creswell JW. Exploring the nature of research questions in mixed methods research. *Journal of Mixed Methods Research* 2007;1(3):207-11.
- (114) Teddlie C, Tashakkori A. *Foundations of mixed methods research: integrating quantitative and qualitative approaches in the social and behavioral sciences.* SAGE; 2009.
- (115) Marsland N, Wilson I, Abeyasekera S, Kleih U. A methodological framework for combining quantitative and qualitative survey methods. Social and Economic Development Department, Natural Resources Institute and the Statistical Services Centre, The University of Reading; 2013. Available at: <http://web.pdx.edu/~stipakb/download/PA555/Qual-Quan1.pdf>.
- (116) Johnson RB, Onwuegbuzie AJ. Mixed methods research: a research paradigm whose time has come. *Educational Researcher* 2004;33(7):14-26.
- (117) Malterud K. Qualitative research: standards, challenges, and guidelines. *Lancet* 2001;358(9280):483-8.
- (118) Lu X, Leino-Arjas P, Piha K, et al. On methodologies for analyzing sickness absence data: An insight into a new method. *World Academy of Science, Engineering and Technology* 2008;17:422-7.
- (119) Barbour R. *Doing focus groups. The SAGE qualitative research kit.* London: Sage Publications; 2007.
- (120) Wibek V. *Fokusgrupper. Om fokuserade gruppeintervjuer som undersökningsmetod.* Lund: Studentlitteratur; 2000. Norwegian.
- (121) Morgan DL. Focus groups. *Annu Rev Sociol* 1996;22:129-52.
- (122) Tillgren P, Wallin E. Fokusgrupper - historikk, struktur och tillämpning. *Soc Med Tidskr* 1999;312-21. Norwegian.

- (123) Krueger RA. Focus groups. A practical guide for applied research. 2nd edition. Thousand Oaks: Sage Publications, Inc.; 1994.
- (124) Kidd PS, Parshall MB. Getting the focus and the group: enhancing analytical rigor in focus group research. *Qual Health Res* 2000;10(3):293-308.
- (125) Barbour RS. Focus groups. In: *Qualitative methods in health research*. SAGE; 2010.
- (126) Halkier B. Fokusgrupper. In: Brinkmann S, Tangaard L editors. *Kvalitative metoder -- en grundbog*. Hans Reitzels Forlag; 2010. Norwegian.
- (127) Kitzinger J. The methodology of focus groups: the importance of interaction between research participants. *Sociology of Health and Illness* 1994;16(1).
- (128) Barbour RS, Kitzinger J. *Developing focus groups: politics, theory and practice*. London: Sage Publications; 1999.
- (129) Morgan DL. Practical strategies for combining qualitative and quantitative methods: applications to health research. *Qual Health Res* 1998;8(3):362-76.
- (130) Ritchie J, Spencer L. Qualitative data analysis. In: Bryman A, Burgess R editors. *Analyzing quantitative data*. London: Routledge; 1994. p. 173-94.
- (131) Srivastava A, Thomson SB. Framework analysis: a qualitative methodology for applied policy research. *JOAAG* 2009;4:72-9.
- (132) Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol* 2013;13:117.
- (133) Smith J, Firth J. Qualitative data analysis: the framework approach. *Nurse Res* 2011;18(2):52-62.
- (134) Ward DJ, Furber C, Tierney S, Swallow V. Using Framework Analysis in nursing research: a worked example. *J Adv Nurs* 2013;69(11):2423-31.
- (135) O'Cathain A, Murphy E, Nicholl J. Integration and publications as indicators of "yield" from mixed methods studies. *Journal of Mixed Methods Research* 2007;1:147-63.
- (136) Ostlund U, Kidd L, Wengstrom Y, Rowa-Dewar N. Combining qualitative and quantitative research within mixed method research designs: a methodological review. *Int J Nurs Stud* 2011;48(3):369-83.

- (137) O'Cathain A, Murphy E, Nicholl J. Why, and how, mixed methods research is undertaken in health services research in England: a mixed methods study. *BMC Health Serv Res* 2007;7:85.
- (138) Driscoll DL, Appiah-Yeboah A, Salib P, Rupert DJ. Merging qualitative and quantitative data in mixed methods research: How to and why not. *Ecological and Environmental Anthropology* 2007;Paper 18.
- (139) Creswell JW, Klassen AC, Vicki L. Clark P, Clegg Smith K. Best practices for mixed methods research in the health sciences. Office of Behavioral and Social Sciences Research (OBSSR). Appointed working group from University of Nebraska-Lincoln, Drexel University and Johns Hopkins University.
- (140) Morgan DL. Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research* 2007;1:48.
- (141) Onwuegbuzie AJ, Leech NL. Linking research questions to mixed methods data analysis procedures. *The Qualitative Report* 2006;11(3):474-98.
- (142) Teddlie C, Yu F. Mixed methods sampling: a typology with examples. *Journal of Mixed Methods Research* 2007;1:77.
- (143) Curry LA, O'Cathain A, Plano Clark VL, Aroni R, Feters M, Berg D. The role of group dynamics in mixed methods health sciences research teams. *Journal of Mixed Methods Research* 2012;6.
- (144) Oyeflaten I, Lie SA, Ihlebaek C, Beage S, Eriksen H. Comparisons of self-reported and register data among Norwegian patients participating in an occupational rehabilitation program. *Norsk Epidemiologi* 2009;19(2):161-7.
- (145) Lincoln YS, Guba EG. *Naturalistic inquiry*. Newbury Park, CA: Sage Publications; 1985.
- (146) Rothman KJ. *Epidemiology: an introduction*. Oxford: Oxford University Press; 2002.
- (147) Szklo M, Nieto J. *Epidemiology: beyond the basics*. London: Jones and Bartlett; 2007.
- (148) Brage S, Kann IC, Kolstad A, Nossen JP, Thune O. Gradert sykmelding – omfang, utvikling og bruk. *Arbeid og velferd* 3/2011; 2011. Norwegian.
- (149) Kann IC, Brage S, Kolstad A, Nossen JP, Thune O. Har gradert sykmelding effekt på sykefraværet? *Arbeid og velferd* 2/2012; 2012. Norwegian.
- (150) Cutcliffe JR, McKenna HP. Establishing the credibility of qualitative research findings: the plot thickens. *J Adv Nurs* 1999;30(2):374-80.



- (151) Statistics Denmark. Statistics Denmark 2014;<http://statistikbanken.dk/FRA05>  
(accessed February 2014).
- (152) Statistics Norway. Statistics Norway 2014;<http://statbank.ssb.no/statistikkbanken>  
(accessed February 2014).
- (153) Stapelfeldt CM, Jensen C, Andersen NT, Fleten N, Nielsen CV. Validation of sick leave measures: self-reported sick leave and sickness benefit data from a Danish national register compared to multiple workplace-registered sick leave spells in a Danish municipality. *BMC Public Health* 2012;12:661.
- (154) Norwegian Ministry of Health and Social Affairs (NOU). Sykefravær og uførepensjonering – Et inkluderende arbeidsliv. Oslo: Norwegian Ministry of Health and Social Affairs; 2000. Norwegian.
- (155) Paulsen B. Evaluering av egenmeldingsforsøket I Kristiansand - ansattes erfaringer og vurderinger. SINTEF Helse. Økonomi, kvalitet og tilgjengelighet. Trondheim: SINTEF Helse; 2005. Norwegian.
- (156) Nossen JP, Thune O. [Trends in sickness absence in the last 20 years]. *Arbeidogvelferd* 2009;3. Norwegian.
- (157) Samvirke AK. Rundt om etterlønnen: Udviklingen i brugen af efterløn; 2010. Danish.
- (158) Kaltenbrunner BB, Grees N, Jakobsson RM, Gerner U, Bergendorff S. Young adults on disability benefits in 7 countries. *Scand J Public Health* 2013;41(12 Suppl):3-26.
- (159) Ose S, Haus-Reve S, Mandal R, Pettersen I. Sykefravær i kommunale tjenester. *Søkelys på arbeidslivet* 2011;28(4):335-54.
- (160) Johansen V, Aronsson G, Marklund S. Positive and negative reasons for sickness presenteeism in Norway and Sweden: a cross-sectional survey. *BMJ Open* 2014;4(2):e004123.
- (161) Lehoux P, Poland B, Daudelin G. Focus group research and "the patient's view". *Soc Sci Med* 2006;63(8):2091-104.
- (162) Hollande J. The social context of focus groups. *Journal of Contemporary Ethnography* 2004;33(5):602-37.
- (163) Lund T, Christensen KB, Vaez M, Labriola M, Josephson M, Villadsen E, et al. Differences in sickness absence in Sweden and Denmark: the cross national HAKNAK study. *Eur J Public Health* 2009;19(3):343-9.



## APPENDICES



Information letter and declaration of consent in Norwegian

Information letter and declaration of consent in Danish

Interview guide in Norwegian

Interview guide in Danish

Approval Norwegian Social Science Data Services



## Forespørsel om deltakelse i forskningsprosjektet

### *”Individuelle, kulturelle og strukturelle årsaker til sykefravær.”*

#### **Bakgrunn og hensikt**

Dette er et spørsmål til deg om å delta i en forskningsstudie for å få kunnskap om holdninger til sykefravær på egen arbeidsplass. Formålet med forskningsprosjektet som er en forlengelse av Egenmeldingsprosjektet er å få kunnskap om holdninger til sykenærver og sykefravær på den enkelte arbeidsplass. Med sykenærver menes det når arbeidstakere går på arbeid, også når en føler seg syk.

Egenmeldingsprosjektet viste at yngre arbeidstakere var raskere enn eldre til å ta i bruk utvidet egenmelding, og i denne undersøkelsen ønsker vi å undersøke om det er forskjeller mellom eldre og yngre arbeidstakere sine holdninger til sykenærver, sykefravær, og bruk av egen- eller legemelding ved sykdom. Vi vil gjøre samme undersøkelse også i Århus for å se i hvilken grad det er samsvarende holdninger til nærver og fravær i to ulike kulturer og regelsett.

Målet med studien er å bidra med/til økt forståelse for hva som fører til sykenærver og sykefravær blant unge og eldre.

Undersøkelsen baserer seg på gruppeintervju med tilfeldig utvalgte arbeidstakere i aldersgruppen under 40 år eller over 50 år fra en avdeling (ikke ledere). Du er tilfeldig valgt ut til å bli forespurt om å delta.

Det vil bli brukt båndopptaker og tatt notater under intervjuet. Institutt for samfunnsmedisin ved Universitetet i Tromsø og Marselisborgcentret ved Universitetet i Århus, Danmark er ansvarlig for forskningsprosjektet.

#### **Hva innebærer studien?**

Studien innebærer at en deltar i et gruppeintervju med 4-6 personer fra egen arbeidsplass og diskuterer ulike synspunkter på sykenærver og sykefravær på generelt grunnlag. Det er ikke fokus på eventuelt eget sykefravær eller sykdomshistorie, men vi ønsker å få kunnskap om det på arbeidsplassen finnes en slags norm, eller felles holdning til nærver og fravær ved sykdom.

Gruppeintervjuet vil vare fra 1 – 1 ½ time, og bli ledet av Line Krane med bistand av en dansk forsker. Det vil bli gjort tilsvarende intervjuer i Århus, Danmark og en vil sammenligne resultatene. Etter intervjuet er avsluttet vil det være mulighet for å stille spørsmål.

Det er frivillig å delta i studien og det vil til enhver tid være mulig å trekke seg uten å begrunne dette. Informasjonen gitt av deg vil bli anonymisert. Intervjuene vil foregå i normalarbeidstiden (kl.09.00 – 15.00) innenfor perioden dd.mm.yyyy til dd.mm.yyyy og bli godskrevet som arbeidstid.

Informasjonen som kommer frem i gruppeintervjuene vil bli behandlet konfidensielt og opplysningene vil bli anonymisert i videre behandling..

#### **Hva skjer med informasjonen gitt av deg?**

Informasjonen som er gitt av deg skal kun brukes slik som beskrevet i hensikten med studien. Alle opplysningene vil bli behandlet uten navn eller andre direkte gjenkjennende opplysninger. Resultatene av studien vil bli publisert som gruppedata, uten at den enkelte kan gjenkjennes.

Prosjektet er tilrådd av Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

Dersom du ønsker å delta i studien, er det fint om du signerer den vedlagte samtykkeerklæringen og returnerer den i den frankerte konvolutten innen 14 dager.

Har du spørsmål i forbindelse med denne henvendelsen, eller ønsker å bli informert om resultatene fra undersøkelsen når de foreligger, kan du gjerne ta kontakt med meg på adressen under.

Prosjektet avsluttes 30. juni 2014. Navnet på den danske forskeren som skal delta i fokusgruppeintervjuene er Eva Ladekjær Larsen.

Björg Elida Romedal ved HMS avdelingen, er vår lokale kontaktperson og vil også kunne svare på spørsmål vedrørende undersøkelsen.

Med vennlig hilsen

Line Krane  
Institutt for samfunnsmedisin  
Universitetet i Tromsø  
Tlf. 77 64 48 84  
E-post: line.krane@uit.no

## **Samtykke til deltakelse i studien ”Individuelle, kulturelle og strukturelle årsaker til sykefravær.”**

Jeg er villig til å delta i studien

-----Kristiansand (dato)-----  
(Signert av prosjektdeltaker, dato)

Informasjon som kommer frem i gruppeintervjuet skal behandles konfidensielt og ikke bringes videre.

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(Signert av prosjektdeltaker, dato)





# Individuelle, kulturelle og strukturelle årsager til sygefravær

## Baggrund og formål

Dette er en henvendelse om din interesse til at deltage i et forskningsprojekt, som undersøger holdninger til sygefravær og sygenærvær på den enkelte arbejdsplads. Med sygenærvær menes når ansatte går på arbejde også selvom de føler sig syge. En tidligere undersøgelse udført af Det Nationale Forskningscenter for Arbejdsmiljø, viser at der forskel på yngre og ældre plejemedarbejderes sygefraværs mønstre. Vi ønsker derfor at undersøge om der er holdningsligheder og holdningsforskelle blandt ældre og yngre ansatte. Lignende undersøgelse udføres i Kristiansand Kommune, Norge for at se i hvilken grad der er overensstemmelse mellem holdninger i de to forskellige lande og i forhold til landenes udformning af politik på området. Formålet med undersøgelsen er at bidrage til en øget forståelse for hvad der leder til sygefravær og sygenærvær blandt unge og ældre.

Undersøgelsen baseres på fokusgruppeinterview ved tilfældigt udvalgte ansatte plejemedarbejdere i aldersgruppen under 40 år eller over 50 år fra to plejeboliger i Århus Kommune. Der anvendes diktafon og tages noter under interviewet. Institut for Samfundsmedicin, Tromsø Universitet og MarselisborgCentret, Center for Folkesundhed Region Midt og Institut for folkesundhed, Århus Universitet er ansvarlige for forskningsprojektet.

## Hvad indebærer din deltagelse

Undersøgelsen indebærer at interesserede medarbejdere deltager i et gruppeinterview med 4-6 personer fra egen arbejdsplads og diskuterer synspunkter på sygefravær og sygenærvær på et overordnet plan. Det vil sige at deltagerne ikke behøver at tage udgangspunkt i eget sygefravær eller sygdomshistorie. Vi ønsker netop at fokusere på om der på arbejdspladsen findes en norm eller fælles holdning til fravær og nærvær ved sygdom.

Gruppeinterviewet vil vare ca. 1 ½ time og ledes af antropolog, ph.d. Eva Ladekjær Larsen med deltagelse af ph.d. studerende Line Krane. Efter interviewet er afsluttet er der mulighed for at stille spørgsmål.

Det er frivilligt at deltage i undersøgelsen og det er til enhver tid muligt at trække sig ud af undersøgelsen uden at begrunde dette. Alle deltagere anonymiseres i den videre behandling af informationerne. Interviewene vil foregå i normalarbejdstiden (kl. 9.00 – 15.00). Tiden du bruger indgår i din arbejdstid. Tidspunktet fastlægges endeligt, når grupperne er sammensat.

## Hvad sker der med informationerne

Informationerne bruges udelukkende til det formål beskrevet ovenfor. Alle oplysninger behandles fortroligt og anonymt. Resultaterne af undersøgelsen vil blive publiceret i et videnskabeligt tidsskrift uden persongenkendelige data.

Såfremt du ønsker at deltage bedes du underskrive vedlagte samtykkeerklæring og aflevere den til mig på interviewdagen.

Har du spørgsmål til undersøgelsen eller ønsker du at blive informeret om resultaterne fra undersøgelsen, når de foreligger, bedes du kontakte mig på nedenstående adresse.

Med venlig hilsen

Eva Ladekjær Larsen

Antropolog, mag.art., ph.d., seniorforsker  
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## **Samtykke til deltagelse i studiet ”individuelle, kulturelle og strukturelle årsager til sygefravær”**

Jeg er villig til at deltage i undersøgelsen og vedkender at de informationer, der fremkommer under interviewene anvendes til viderebehandling i anonymiseret form.

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Dato, sted og projektdeltagers underskrift



## **Intervjuguide: Individuelle, kulturelle og strukturelle årsaker til sykefravær.**

Innledende: Presentere oss selv og sørge for at samtykkeerklæringerne er underskrevet.

1. Først vil vi gjerne vite litt om hvordan en typisk arbeidsdag ser ut – kan dere fortelle litt om det?
  - a. rutiner
  - b. sosialt arbeidsmiljø
  - c. ledelsen
  
2. Hvordan håndterer arbeidsplassen sykefravær?
  - a. Hva skjer når man melder seg syk rent praktisk?
  - b. Følger arbeidsleder opp på sykefraværet?
  - c. Er det noen som overtar ens ansvar, mens man er sykemeldt? (vikarer)
  
3. Årsaker til sykefravær
  - a. Vet man hvorfor en kollega har meldt seg syk?
  - b. Hva er de typiske årsaker til at man er syk (symptomer)
  - c. Hvornår er det okay at melde seg syk (feber, forkjølelse, vondt i hodet, ryggproblemer, magen osv.)
  - d. Er det noen former for sykdommer, hvor man har blitt hjemme, men egentlig godt kunne ha ivaretatt arbeidsoppgavene?
  - e. Er det okay å melde seg syk, hvis man ikke er syk? - Hvis man feks har problemer av sosial karakter eller sykdom i familien.
  - f. Kan sykefraværet skyldes fysiske/sosiale belastninger på arbeidsplassen?
  - g. Kan sykefraværet skyldes dårlig ledelse eller dårlig organisering?
  
4. Sykenærvær
  - a. Er det noen sykdommer, hvor det er akseptabelt å gå på arbeide?
  - b. Hvor syk skal man være for å bli hjemme?
  - c. Skjer det at kollegaer eller arbeidsleder ber en kollega om å gå hjem, hvis vedkommende er dårlig (slø) eller syk?
  - d. Hvilke arbeidsoppgaver kan man ikke klare hvis man er syk?
  - e. Er en kollega 'besværlig', hvis vedkommende er på arbeide, men ikke fullt ut arbeidsdugelig/arbeidsfør?
  
5. Lengden av sykefravær
  - a. hva er kort fravær tidsmessig og hva er sykdomsårsakerne hertil?
  - b. hva er langt fravær tidsmessig og hva er sykdomsårsakerne hertil?
  
6. Kollegial håndtering af sykefravær (praktisk, moralsk og sosialt)
  - a. Hvordan fordeles arbeidsoppgaverne mellom dere under sykdom?
  - b. Snakkes det om den syke kollega – er det forståelse?
  - c. Skjer det at en sykemelding er irriterende?
  - d. Skjer det at man tenker at kollegaen ikke kan klare jobben og bør søke en annen jobb?
  - e. Er det oppbakning fra kollegaer, hvis man er sykemeldt?

- f. Er det noen sykdommer gir større forståelse/der afføder mere forståelse?
- g. Er man mere respektert hvis man har meget lite sykefravær?
- h. Er det noen kollegaer som er mere respektert ift sykefravær?
- i. Opplever dere mobbing – og er det relatert til høyt/meget fravær?

#### 7. Ledelsen og anerkjennelse

- a. Synes dere det er oppbaking fra ledelsen ved sykefravær (er det forståelse for at arbeidet er krevende?)
- b. Er det oppbaking fra ledelsen generelt?
- c. Får man ros for sitt arbeide?
- d. Har dere selv innflytelse på jobben?

#### 8. Jobbtilfredshet

- a. Er dere fornøyde/tilfredse med arbeidet?
- b. Hva gjør en god/dårlig arbeidsdag
- c. Forslag til forbedringer

#### Kausuistikker:

1. En kollega har ryggproblemer – blir vedkommende hjemme? Hvilke typer oppgaver kan hun typisk klare eller ikke klare?
2. En kollega gjennomgår en skilsmisse/Har et barn med stoffmisbruk – Er det okay å sykemelde seg?
3. En kollega var på fest i går, er det okay å bli hjemme?
4. En kollega er på vei til å bli forkjølet – Skal man bli hjemme, eller ser man tiden ann for å se hvordan forkjølelsen utvikler seg?

Har dere noe å tilføye/noe dere vil spørre oss om?

## Interviewguide: Individuelle, kulturelle og strukturelle årsager til sygefravær

Indledende: Præsenter os selv og sørg for at samtykke erklæringerne er underskrevet.

1. Først vil vi godt vide lidt om hvordan en typisk arbejdsdag ser ud – kan I fortælle lidt om det?
  - a. rutiner
  - b. socialt arbejdsmiljø
  - c. ledelsen
  
2. Hvordan håndterer arbejdspladsen sygefravær?
  - a. Hvad sker der når man melder sig syg rent praktisk?
  - b. følger arbejdsleder op på sygefraværet
  - c. Er der nogen der overtager ens ansvar, mens man er sygemeldt? (vikarer)
  
3. Årsager til sygefravær
  - a. Ved man hvorfor en kollega har meldt sig syg?
  - b. Hvad er de typiske årsager til at man er syg (symptomer)
  - c. Hvornår er det okay at melde sig syg (feber, forkølelse, ondt i hovedet, rygproblemer, maven osv.)
  - d. Er der nogle former for sygdomme, hvor man er blevet hjemme, men egentlig godt kunne have varetaget arbejdsopgaver?
  - e. Er det okay at melde sig syg, hvis man ikke er syg. Hvis man fx har problemer af social karakter eller sygdom i familien
  - f. Kan sygefraværet skyldes fysiske/socialt belastninger på arbejdspladsen?
  - g. Kan sygefraværet skyldes dårlig ledelse eller dårlig organisering?
  
4. Sygenærvær
  - a. Er der nogle sygdomme, hvor det er acceptabelt at gå på arbejde?
  - b. Hvor syg skal man være for at blive hjemme?
  - c. Sker det at kollegaer eller arbejdsleder beder en kollega om at gå hjem, hvis vedkommende er sløj eller syg?
  - d. Hvilke arbejdsopgaver kan man ikke klare hvis man er syg?
  - e. Er en kollega 'besværlig', hvis vedkommende er på arbejde, men ikke fuldt ud arbejdsduelig?
  
5. Længden af sygefravær
  - a. hvad er kort fravær tidsmæssigt og hvad er sygdomsårsagerne hertil?
  - b. hvad er langt fravær tidsmæssigt og hvad er sygdomsårsagerne hertil?
  
6. Kollegial håndtering af sygefravær (Praktisk, moralsk og socialt)
  - a. hvordan fordeles arbejdsopgaverne mellem jer under sygdom?
  - b. Tales der om den syge kollega – er der forståelse?
  - c. Sker det at en sygemelding er irriterende?
  - d. Sker det at man tænker at kollegaen ikke kan klare jobbet og bør søge et andet?
  - e. Er der opbakning fra kollegaer, hvis man er sygemeldt?
  - f. Er der nogen sygdomme der afføder mere forståelse?

- g. Er man mere respekteret hvis man har meget lidt sygefravær?
- h. Er der nogle kollegaer der er mere respekterede ift sygefravær?
- i. Oplever i mobning – og er det relateret til meget fravær?

#### 7. Ledelsen og anerkendelse

- a. Synes I der er opbakning fra ledelsen ved sygefravær (er der forståelse for at arbejdet er krævende?)
- b. Er der opbakning fra ledelsen generelt?
- c. Får man ros for sit arbejde?
- d. Har I selv indflydelse på jobbet?

#### 8. Jobtilfredshed

- a. Er I tilfredse med arbejdet?
- b. Hvad gør en god/dårlig arbejdsdag
- c. Forslag til forbedringer

#### Kausuistikker:

1. En kollega har rygproblemer – bliver vedkommende hjemme? Hvilke typer opgaver kan hun typisk klare eller ikke klare?
2. En kollega gennemgår en skilsmisse/Har et barn med stofmisbrug – Er det okay at sygemelde sig?
3. en kollega var til fest i går, er det okay at blive hjemme?
4. En kollega er på vej til at blive forkølet – Skal man blive hjemme, eller ser man tiden an for at se hvordan forkølelsen udvikler sig?

Har I noget at tilføje/noget I vil spørge os om?





Nils Fleten  
Institutt for samfunnsmedisin  
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MH-bygget  
9037 TROMSØ

Vår dato: 10.08.2010

Vår ref: 24090 / 2 / KH

Deres dato:

Deres ref:

## TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 22.03.2010. All nødvendig informasjon om prosjektet forelå i sin helhet 17.06.2010. Meldingen gjelder prosjektet:

24090                      *Individuelle, kulturelle og strukturelle årsaker til sykefravær i ung alder, 18-40 år.  
Komparativ studie mellom Norge og Danmark*  
Behandlingsansvarlig      *Universitetet i Tromsø, ved institusjonens øverste leder*  
Daglig ansvarlig            *Nils Fleten*

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

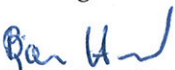
Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, vedlagte prosjektvurdering - kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, [http://www.nsd.uib.no/personvern/forsk\\_stud/skjema.html](http://www.nsd.uib.no/personvern/forsk_stud/skjema.html). Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://www.nsd.uib.no/personvern/prosjektoversikt.jsp>.

Personvernombudet vil ved prosjektets avslutning, 30.06.2014, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

  
Bjørn Henriksen

  
Kjersti Håvardstun

Kontaktperson: Kjersti Håvardstun tlf: 55 58 29 53

Vedlegg: Prosjektvurdering



## Prosjektvurdering - Kommentar

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24090

Prosjektet inngår som en del av Ung-Trygd prosjektet finansiert av Norges Forskningsråd ved programmet "Forskning på årsaker til sykefravær og utstøting fra arbeidslivet". Hovedfokus i fellesprosjektet er å studere individuelle, arbeidsrelaterte, kulturelle og strukturelle årsaker til mislykket inklusjon, sykefravær og eksklusjon fra arbeidsstyrken i ung alder. Hovedfokus i det innmeldte underprosjektet er sykefravær hos unge. Formålet med studien er å undersøke om rammevilkår, oppfølging, holdninger og kjønn kan ha betydning for sykefraværs mønster og mulige aldersbestemte forskjeller.

Prosjektet gjennomføres i samarbeid med Universitetet i Århus. Behandlingsansvaret for prosjektet er delt ved at Universitetet i Tromsø vil være databehandlingsansvarlig for den norske delen av studien. Denne delen gjennomføres av stipendiat Line Krane. Universitetet i Århus vil være behandlingsansvarlig for den danske delen av studien. Personvernombudets vurdering av prosjektet omfatter derfor kun den norske delen. Det opplyses at samarbeidspartner i Århus har meldt den danske delen av studien til tilsvarende instans i Danmark.

Ombudet forutsetter at denne behandlings-/ansvarsfordelingen formelt er avklart mellom institusjonene (evt. også mellom Fleten og Krane), og anbefaler at det utarbeides en avtale som bl.a. omfatter ansvarsfordeling, ansvarsstruktur, hvem som initierer prosjektet, bruk av data og eventuelt eierskap.

Prosjektet er todelt og gjennomføres med registerdata og data fra gruppeintervju.

### UTVALG

Utvalget for registerdelen består av alle ansatte i en norsk kommune med rett til bruk av egenmelding i perioden 2004 tom 2008, anslagsvis 8000 personer.

Utvalget for fokusgruppeintervju består av cirka 20 ansatte i utvalgte enheter i kommunen.

### TREKKING/REKRUTTERING

Utvalget for registerdelen trekkes fra den aktuelle kommunens personalregister.

Fokusgruppedeltakere blir invitert til deltagelse gjennom brev til et tilfeldig utvalg i aktuelle aldersgruppe i utvalgt arbeidsplass. Ombudet forutsetter at arbeidsplassen sender ut forespørselen på vegne av prosjektleder.

### INFORMASJON OG SAMTYKKE

Det tas ikke kontakt med den enkelte i forbindelse med registerstudien. Prosjektleder opplyser at de ansatte i kommunen forøvrig er orientert om at forsøket med utvidet rett til egenmelding vil evalueres i samarbeid med ISM universitetet i Tromsø og NTNU. Ombudet ber om at et eventuelt behov for dispensasjon fra taushetsplikten for tilgang til registerdata avklares med kommunen. Det forutsettes at nødvendige tillatelser foreligger, og at taushetsplikten ikke er til hinder for den behandling av data som finner sted. Vi ber om å få tilsendt kopi av dispensasjon/tillatelse.

Ombudet finner informasjonsskrivet til deltakere i gruppeintervju tilfredsstillende forutsatt at det tilføyes at prosjektslutt er 30. juni 2014, samt navn og kontaktopplysninger til den danske forskeren. Vi ber om å få tilsendt revidert skriv.

### DATAMATERIALE

Det innhentes opplysninger fra arbeidsgivers personalregister med opplysninger om fravær. Dataene er av administrativ karakter og inneholder opplysninger om alder, kjønn, utdanning, lønn, stillingsprosent, ansettelses dato, fravær med fra og til dato, fraværprosent og fraværskorde (egenmeldt/legemeldt) og registrering av om det har vært oppfølgingssamtale, samtale om tilrettelegging eller om sykefravær skyldes yrkesskade. Opplysningene

vil kunne være indirekte personidentifiserende da f.eks. alder, kjønn og arbeidsplass gir åpninger for at en vil kunne identifisere personer på mindre enheter. Ansettelsesdato antas også å kunne bidra til personidentifikasjon.

Ombudet vurderer opplysningene som sensitive opplysninger om helseforhold, jf. personopplysningsloven § 2 punkt 8 c).

I fokusgruppeintervjuene innhentes opplysninger om holdninger til sykefravær og hvordan de ulike arbeidsplassene forholder seg til sykefravær.

#### REGISTRERING/OPPBEVARING

Kommunen oppretter og oppbevarer koblingsnøkkelen med hensyn til registerdata. Nøkkel til navn, personnummer eller adresse blir ikke levert prosjektet.

De norske og danske registerdataene vil samordnes og slås sammen til en fil som muliggjør analyser med nasjonalitet som uavhengig variabel i analyser av fraværmønstre. Koblingsnøkkel for de danske dataene vil ikke være tilgjengelig for Line Krane, og tilsvarende vil koblingsnøkkelen for de norske dataene ikke være tilgjengelig for den danske forskeren.

Ombudet gjør oppmerksom på at en søknad om dispensasjon fra taushetsplikten eller annen tillatelse for tilgang til data må omfatte den danske forskeren, i og med at datamaterialet er indirekte personidentifiserende.

Gruppeintervjuene gjennomføres ved at stipendiat Line Krane leder norske gruppeintervju med dansk forsker tilstede, og vice versa. Intervjuene registreres ved bruk av lydopptak og vil bli anonymisert ved transkribering.

#### HJEMMELSGRUNNLAG

Personvernombudet finner at behandlingen av registerdata kan finne sted med hjemmel i personopplysningsloven (§§ 8 d) og 9 h). Sykefravær medfører betydelige samfunnsøkonomiske kostnader, og prosjektleder opplyser om at Arbeidskraftundersøkelsene taler for store forskjeller i sykefraværet i Norden. Det er imidlertid lite kunnskap om forskjeller i sykefravær basert på registrering av sammenlignbare grupper mellom Norge og Danmark. Også når det gjelder holdninger til arbeidsfravær og arbeidsnærvær ved sykdom er kunnskapene fra komparative studier svært begrenset, ifølge prosjektleder. Formålet med studien er å undersøke om rammevilkår, oppfølging, holdninger og kjønn kan ha betydning for sykefraværmønstre og mulige aldersbestemte forskjeller i en komparativ studie av sykefravær, og kunne bidra med kunnskap som er av stor samfunnsmessig verdi. Ulempen for de registrerte reduseres ved at de er informert om at ordningen med utvidet rett til egenmelding vil bli evaluert. Studien er også mindre inngripende ved at det ikke registreres årsaker til sykemelding. På bakgrunn av at prosjektleder ikke har tilgang til navne- og adresseopplysninger, samt utvalget størrelse, finner ombudet at det kan gis fritak fra underrettelsesplikten, jf. pol § 20 b). Som nevnt over forutsettes at tilgang til registerdata er avklart med registreier, og at nødvendige tillatelser foreligger.

Ombudet finner at behandlingen av intervjudata kan finne sted med hjemmel i pol § 8 første ledd samtykke.

#### PROSJEKTSLUTT

Prosjektslutt er 30.06.2014. Datamaterialet anonymiseres ved at verken direkte eller indirekte personidentifiserbare opplysninger fremgår. Koblingsnøkkel/ansattnummer og lydopptak slettes, og indirekte personidentifiserbare opplysninger som arbeidsplass (ansvarsenhet) fjernes, omskrives eller grovkategoriseres.