

Sickness presenteeism among nurses

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This master thesis has been conducted in cooperation with the Department of Social Work and Health Science at the Norwegian University of Science and Technology. The inspiration for this thesis was born through a combination of my own work situation and the strong focus from society on sickness absenteeism and on being present at work. I have always had the opinion that being present is not always a good thing neither for the employee nor the employer, although I too have inclined towards going to work in all but the worst cases. Since I am a nurse myself, I found it both more accessible and the most interesting to focus on this occupational group.

Working on this thesis has given me a lot of knowledge and experience. Not only have I had the opportunity to immerse myself in a subject that is close to my occupational life, one that had already caught my attention - I have also chosen to test and improve my written English at the same time. The work has been both challenging and very time-consuming, but it has also given me the pleasure of overcoming obstacles and challenges along the way. This thesis could not have been done without the help and support of my family, especially my cohabitant Trond and my sister Marit. Thank you for helping, for motivating me when I have needed it and for countless read-through's of my work. Without you I would never have been able to do this.

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MAIN SUMMARY

This thesis is the main product of a Masters degree in Health Science, written by a student at the Department of Social Work and Health Science at Norwegian University of Science and Technology. The thesis discusses sickness presenteeism in general and sickness presenteeism among nurses in particular. Nursing is one of the occupations that are more exposed to sickness presenteeism. Despite this, very little research has yet been done on this correlation – in Norway, almost none.

The thesis consists of two articles. The first article presents the concept of sickness presenteeism along with existing theories and research in general and concerning nurses. This is a theoretical article, in which the purpose is to identify why sickness presenteeism is not an ideal situation for nurses and which work-related factors that influence sickness presenteeism among nurses. The research question for this article is “*What work-environmental factors have an influence on nurses sickness presenteeism?*”

The second article is an empirical article and is done in connection with a survey of nurses’ sickness presenteeism within a Norwegian hospital. The survey examines the connection between sickness presenteeism and the use of substitutes, different working time arrangements and the influence of teamwork. The purpose of this article is to assess how the three work-environmental factors influences nurses’ sickness presenteeism, conducted with the help of three hypotheses. These are:

H₁: *Working-time arrangements have an influence on sickness presenteeism*

H₂: *Low extent of using substitutes is related to higher level of sickness presenteeism*

H₃: *Good working relationship between co-workers is related to higher level of sickness presenteeism*

The empirical work for this master’s thesis has been conducted using a quantitative method. This method was chosen based on a desire to investigate the extent, distribution and differences within sickness presenteeism among nurses. A quantitative method gives an opportunity to investigate a larger group of nurses, and obtain results that can also be valid for other nurses. If a qualitative method were to be used, it would not have been possible to collect information from the same number of nurses and the results would most likely not represent nurses in general because of assumed differences between nurses. By using a

qualitative method I was also able to compare the results with results from similar studies done in other countries. Still, the quantitative method has little room for a flexible approach to theory, and does not provide information about what might cause the sickness presenteeism. I still found this method to be the most suitable for what I wanted to achieve in this master's thesis. A survey based on questions used by other researchers with an interest in the same field, was used to collect data. Using questions that others had already used made the results easier to compare, and also acted as some kind of quality control to the questions I first developed. The choices made concerning the survey, items and analysis is further described in chapter **2.0 Method** of my empirical article. The strength and limitations of the method is discussed in chapter **4.1 Strengths and limitations** of that same article.

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**Factors in the work-environment influencing
sickness presenteeism among nurses**

Abstract

Sickness presenteeism is explained as attending work, despite having medical conditions that suggests you should be absent. Nurses are one of the occupational groups who appear to be highly exposed for sickness presenteeism. The consequences of attending work when being ill could be related both to the nurse herself and to the quality of the care for patients. The aim of this paper is to investigate what work-environmental factors the literature has revealed as the most influential on sickness presenteeism among nurses, using the research question: “*Which work-environmental factors have an influence on nurses’ sickness presenteeism.* Four work-environmental factors in connection with the nursing occupation have been chosen as the focal point of the paper. These are *job demands, adjustment latitude, ease of replacement* and *teamwork*. It seems like these and several other work-environmental factors could influence the decision on going to work while being ill among nurses. Increased knowledge on sickness presenteeism among nurses and how the work-environmental factors influence are needed to be able to draw some conclusions about this.

1.0 INTRODUCTION

Sickness presenteeism defined as attending work despite being ill, is a topic that traditionally has received little interest in research (Aronsson, Gustafsson and Dallner 2000). In Norway, the focus has been on sickness absenteeism, and not sickness presenteeism. One of the reasons why the focus has been on absence is the high costs of sickness absenteeism, for both companies and the society as a whole, and the desire to reduce this cost. Trying to reduce this cost has intentionally or unintentionally caused an increased focus on presenteeism among employees (i.e. the Norwegian projects “inclusive employment” and “active sick-leave”). But research shows that sickness presenteeism is just as common as sickness absenteeism (Hansen and Andersen 2008).

It looks like the research on presenteeism in general has been characterized by two different approaches. Johns (2010) writes that European scientists have mainly been interested in job insecurity and other characteristics of the occupation, focusing on the frequencies of the presenteeism, while American scientists have focused more towards consequences concerning productivity. However, one thing the researchers seem to agree on, is that employees working in care professions or working *with* people in general (i.e. nurses, teachers, etc.) share a greater risk of sickness presenteeism (Aronsson, Gustafsson, & Dallner, 2000; Letvak, Ruhm, & Gupta, 2012; Martinez & Ferreira, 2012; Widera, Chang, & Chen, 2010).

It has also been shown that sickness presenteeism could lead to consequences such as long-term absence (Hansen and Andersen 2009; Dellve, Hadzibajramovic and Ahlborg 2011) and reduction in the health conditions of employees (Dellve, Hadzibajramovic, & Ahlborg, 2011; Ferreira et al., 2006; Johns, 2010; Martinez & Ferreira, 2012; Umann, Guido, & Grazziano, 2012). The topic has also been connected to the expense of having employees attending work while not being able to perform fully (Widera et al., 2010). All of this combined with the high degree of sickness presenteeism among healthcare workers makes it important to obtain a greater understanding of what influences sickness presenteeism.

1.1 Literature search

To provide background literature for this study, several searches were done using databases available through NTNU such as ISI Web of Science, Pubmed and Google Scholar. The searches were focused on research articles written in English, primarily based on quantitative

studies. Articles available with full text were preferred.

The literature is published mainly in health-, medical and social science journals online. As the amount of studies regarding sickness presenteeism among nurses is limited, the literature search did not exclude articles regarding sickness presenteeism in general. All relevant results were reviewed, and so were also the citations and references used in these results.

Some of the keywords used were “*sickness presenteeism*”, “*sickness attendance*”, “*presenteeism*”, “*nurses*”, “*nursing*”, “*healthcare workers*”, and “*sickness absenteeism*”.

1.2 Research question

The aim of this paper is to identify which work-environmental factors the literature has revealed as most influential on sickness presenteeism among nurses. The paper is thus based on the following main question, “*Which work-environmental factors have an influence on nurses sickness presenteeism?*”

2.0 SICKNESS PRESENTEEISM

2.1 What is sickness presenteeism?

The term sickness presenteeism was first applied in the literature during the 1990s to describe the increasing amount of workers who attended work despite being sick, in fear of losing their jobs (Chapman, 2005). To this day there are still many varying definitions on the term, and there is no common consensus on a unified definition. The term has been criticized for being diffuse and lacking nuance because of this. Johns (2010) has written a general article on presenteeism in the workplace. In this article he has gathered a list of ten different definitions, including his own. Common for all of these 10 definitions is that they in some way concern the act of being present at the workplace. However, the definitions admittedly have different focus – from the very general “Attending work, as opposed to being absent” to the sickness related “Reduced productivity at work due to health problems”. The most commonly used definition by both organizational scholars and in occupational health literature is the definition by Aronsson, Gustafsson and Dallner (Johns, 2010). This is a group of Swedish scientists who have put a great effort into the subject, ending up defining sickness presenteeism as “going to work, despite having medical conditions that suggest you should be

absent” (Aronsson et al., 2000). This is a good definition because of its simple wording, thus leaving it easy to understand, also for people without specific scientific background.

Previous literature have also used different terms with similar meaning, such as “Sickness attendance” (Dellve et al., 2011; Hansson, Bostrom, & Harms-Ringdahl, 2006; Johansson & Lundberg, 2004), “Working through illness” (Dew, Keefe, & Small, 2005) or “Inappropriate non-use of sick leave” (Grinyer & Singleton, 2000). In this paper I will consequently use the term “sickness presenteeism” referring to the definition by Aronsson, Gustafsson and Dallner (2000).

2.2 Sickness presenteeism among nurses – a risk?

Going to work while being ill will in most cases be a harmless act and only reduce the workability and productivity of the employee. But in some lines of work, it could involve worse consequences, particularly in occupations where the employee is in direct contact with other people (Letvak et al., 2012; Martinez & Ferreira, 2012; Widera et al., 2010). Nursing is one example of such an occupation. Combined with the responsibility of nurses towards the health and wellbeing of the patients, working when one is sick could be dangerous and sometimes even fatal to patients.

For nurses, attending work despite being ill can have consequences for the quality of care of the patient. Martinez and Ferreira point out that being at work when you should have been at home, may increase the rate of medical errors and affect patient safety (Martinez & Ferreira, 2012). This was confirmed by a survey from North Carolina, USA, where Letvak et al (2012) found a significant link between sickness presenteeism among nurses and the number of patients falling. The study also reinforced the findings done by Martinez and Ferreira (2012), discovering an increased number of medical errors, such as patients receiving the wrong medicine or an incorrect dosage of their medicine (Letvak et al., 2012).

Most nursing jobs involve direct contact with patients. A nurse might be in contact with tens of patients during only one single shift. In addition to lowering the quality of care, showing up at work while being ill also increases the risk of infecting several patients. Widera, Chang and Chen (2010) presented in their article a case report where staff members located in the healthcare sector attended work despite symptoms of nausea, vomiting and diarrhea, causing a

34 day long outbreak of the norovirus among both patients and staff members. Even though this was just a fictive event, it is not unlikely that a real situation would cause the same effects. The consequences could be fatal for patients, who often already have somewhat of a reduced immune system or other health issues. The underlying reason for the sickness presenteeism is of course a relevant factor. Not all sickness is infectious, and if one were present at work despite e.g. migraine or neck pain – the risk of infections spreading would be absent and not a topic at all.

Sickness presenteeism has also been associated with negative effects on the health of employees themselves (Dew, 2011; Johns, 2010; Martinez & Ferreira, 2012; Umann et al., 2012). Martinez and Ferreira (2012) claim there exists a connection between sickness presenteeism and decreasing health. A group of Brazilian researchers found a link between the physical health of nurses and their ability to work. If the physical health was affected – the ability to perform work tasks was limited (Umann et al., 2012). Sickness presenteeism is also highlighted as a risk for both future sickness presenteeism and future sickness absence (Aronsson et al., 2000). Dellve, Hadzibajramovic and Ahlborg (2011) have done research on healthcare workers where they, among other things, examined the health-related consequences. Their findings proved a connection between sickness presenteeism (or, in their terms, sickness attendance) and poor health, burnout and sick leave among the employees.

2.3 Three theoretical models of sickness presenteeism

Based on earlier research, three models concerning sickness presenteeism have been presented. Two of the models (the model by Aronsson and Gustafsson and the model by Johns) are directly connected to sickness presenteeism, while the first model (by Steers and Rhode) concerns presenteeism in general but is still an important contribution to research on the field.

The most examined and well-known model is the Steers and Rhodes model (Guttormsen & Saksvik, 2006). This model has, as mentioned, had a great influence on presenteeism research. The idea of this model is the thought that the decision of an employee to be present or absent is influenced by two main factors; the employees motivation for attendance and his or hers ability to come to work (Steers & Rhodes, 1978). As shown in figure 1, several factors influence the employees' decision making. Steers and Rhodes mention both characteristics

regarding the job situation, personal characteristics, pressure and ability to attend, as well as the values and job expectations of each employee. They also mention job satisfaction, attendance motivation and employee attendance. Steers and Rhodes have thus identified many important influential factors, since the model was developed by reviewing 104 empirical studies. However it has been criticized for being difficult to test empirically and there have been few attempts to test the model scientifically. Another disadvantage of the model is, as mentioned initially, that it focuses on general presenteeism in addition to sickness presenteeism.

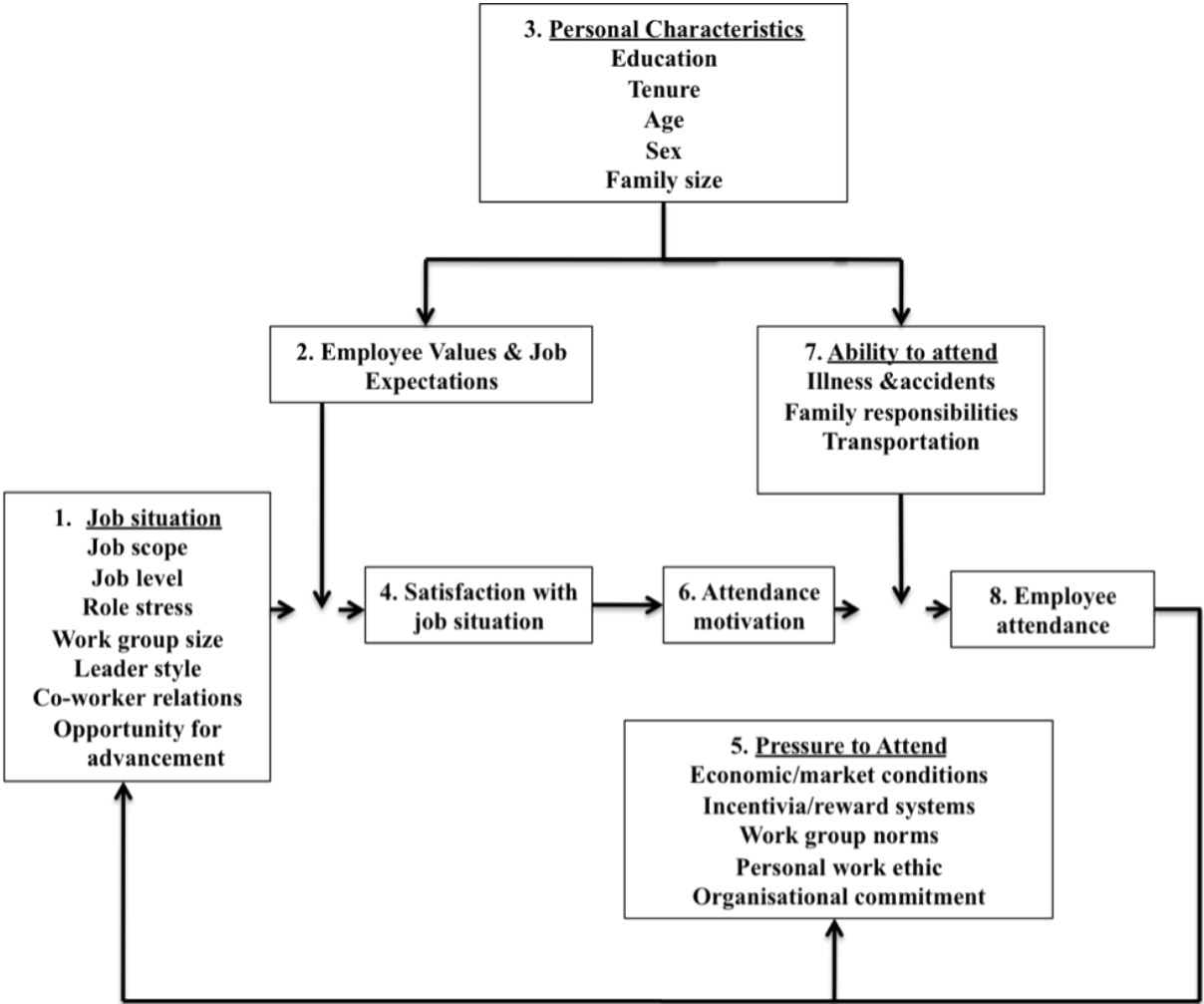


Figure 1: Major influence on employment attendance, a model by Steers and Rhodes (1978)

Aronsson and Gustafsson developed the first model directly connected to sickness presenteeism. The model (figure 2) is based on results from their own empirical survey and meant as a tool for further research. It is divided in two parts, where the first part addresses

sickness presenteeism and sickness absenteeism as two possible outcomes when an employee is ill or has reduced work capacity. In some ways the concept bears resemblance to the model by Steers and Rhodes, but where Steers and Rhodes addresses presenteeism, Aronsson and Gustafsson addresses sickness presenteeism, and is therefore more specific. Additionally, the first part of the model of Aronsson and Gustafsson suggests which characteristics of the work-environment and the employee’s personal demands that would influence the decision of being present or absent. The second part of the model proposes a longitudinal relationship between sickness presenteeism and sickness absenteeism, and the future health of the employee.

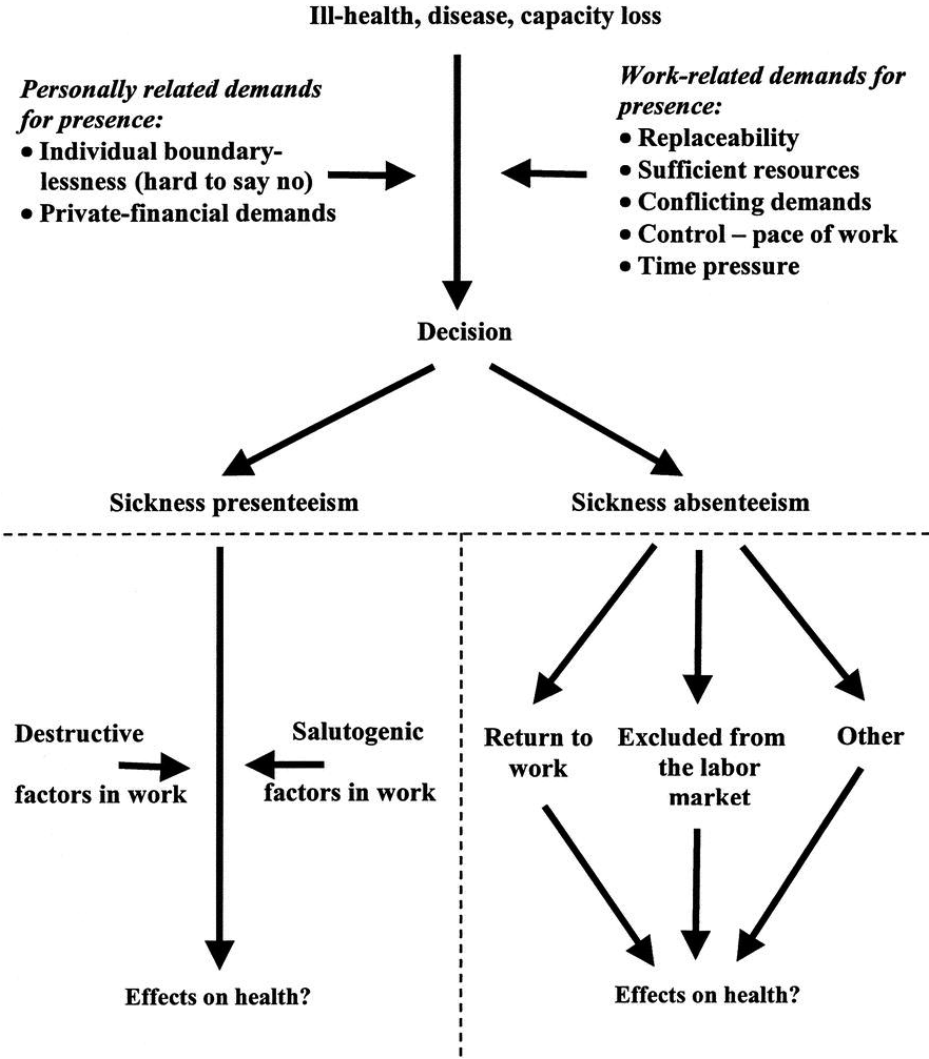


Figure 2: The model of Aronsson and Gustafsson (2005)

Five years after Aronsson and Gustafsson published their model, Johns (2010) presented a model suggesting how to address sickness presenteeism in the future (figure 3). The model is based on existing empirical evidence and addresses both presenteeism and absenteeism. Job presence or “Fully productive regular attendance” is interrupted by some kind of “Health event”, which could be acute, episodic or chronic. It is this interruption that leads to either presenteeism or absenteeism. The decision on being present or absent is affected, both directly and indirectly, by work context and personal factors. After making the decision, there are other factors that decide how this would influence the health of the employee. John emphasizes that the model should be read in a long-term perspective.

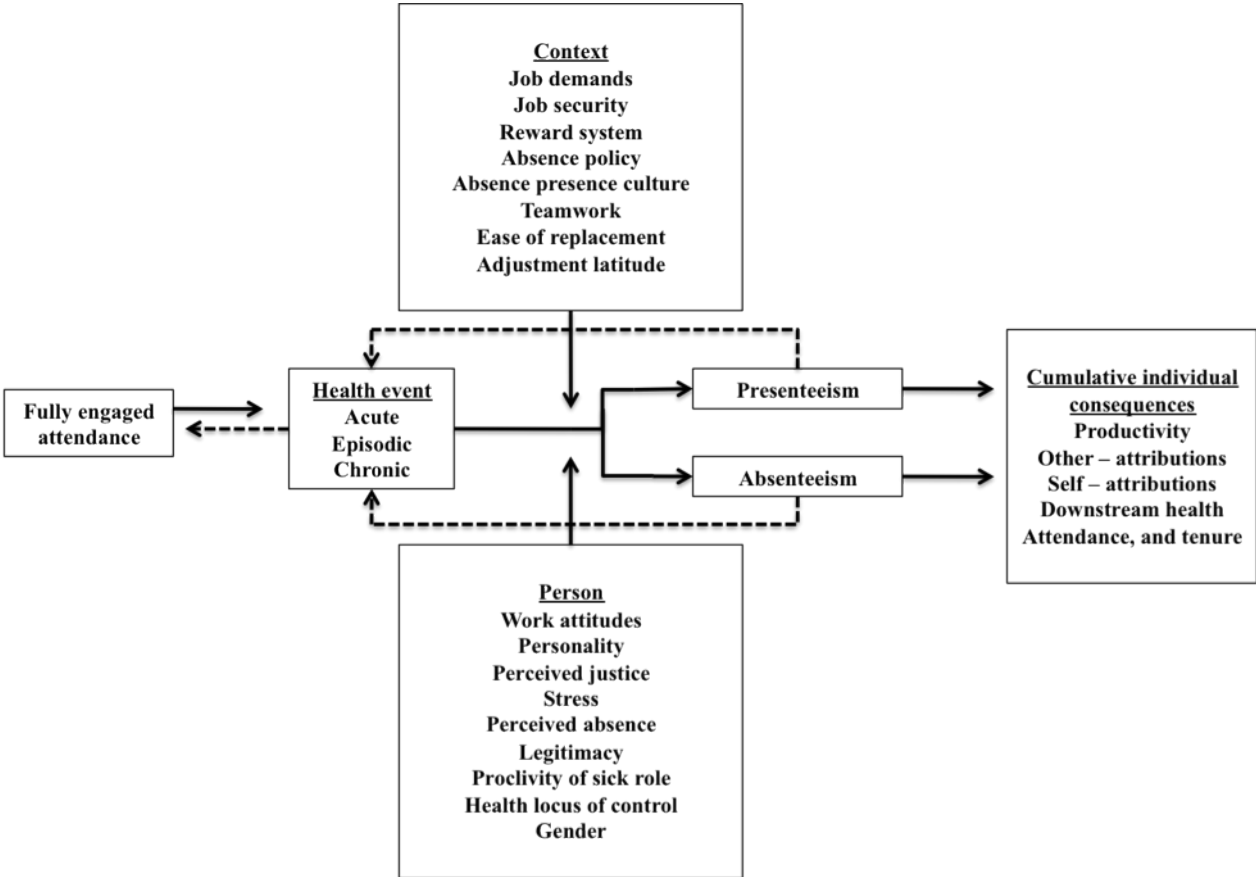


Figure 3: A dynamic model of presenteeism and absenteeism by Johns (2010)

3.0 WORK-RELATED FACTORS INFLUENCING SICKNESS PRESENTEEISM

As the three models above illustrates, several factors may influence the decision on either going to work or staying at home when being ill. Multiple studies indicate that a combination of different factors affect sickness presenteeism (Crout, Chang, & Cioffi, 2005; Martinez & Ferreira, 2012). Theory concerning presenteeism in general, work-environmental, personal- and organizational factors has been highlighted. Johns (2010) divides the research into three categories; organizational policies, job design and presenteeism culture. Salary arrangements, downsizing and permanency of employment constitute the first category, organizational policies. The second category consists of job demands, adjustment latitude, ease of replacement and teamwork, whilst the last category includes presenteeism cultures in general, created to oppose the absenteeism culture. The focus of this article will address the second category regarding job design features, using Johns' (2010) categorizations.

3.1 Job demands

The term job demands addresses the demands applicable to the employee in his or her working situation. Using Karasek's Demand-Control-model to define the term, job demands include pace of work, working time, time pressure and stress (Karasek, 1979). All these demands affect the employees on a physical or psychological level, and in many work relations the employee has little influence on the demands. Regarding Karasek's model, job demands could influence sickness presenteeism both positively and negatively depending on how much control over the working situation the employee has. The model presents four outcomes depending on the level of job demands and job control, without going in further detail on this. By going through earlier research, I have found four subcategories of job demands. These are time pressure, perceived work stress, job insecurity and job satisfaction. These will be presented further in the following part.

Time pressure is one of the job demands that have been examined in direct connection with sickness presenteeism (Claes, 2011; Dellve et al., 2011; Claus D. Hansen & Andersen, 2008). In the study done by Hansen and Andersen (2008), the aim was to assess the impact of possible work-related-, and personal attitudes towards sickness absence and sickness presenteeism. The results highlighted having a supervisory role and/or more than 45 working hours a week as the main reasons for increased probability of sickness presenteeism. Dellve et al (2011) and Claes (2011) show similar findings. The opposite was found by Martinez and

Ferreira (2011), however. The women in their results putting in more working-hours than average were less vulnerable for presenteeism.

Elstad and Vabo (2008) examined how perceptions of job stress were associated with both sickness absence and sickness presenteeism among female workers in Nordic elderly care. They used four items to measure job stress. These were how frequently the workplace was understaffed because of absence/vacation, whether respondents felt they usually had to attend to “too many” clients during work shifts, how often they missed lunch because of time pressure and to what extent they felt that they had “too much to do in their work”. These four items can also individually be seen as ease of replacement (referring to understaffing in the workplace) and different explanations of time pressure, even though Elstad and Vabo call it “job stress”. Their results showed increased risk of sickness presenteeism where the level of job stress was high.

Two other work-related factors involving job demands presented in the literature is job insecurity and job satisfaction. Job insecurity has been connected to presenteeism explained as a motivation to go to work despite illness in fear of losing one's job (Claus D. Hansen & Andersen, 2008; Martinez & Ferreira, 2012). This has also been connected to the level of unemployment, where high unemployment levels result in higher job insecurity (Claus D. Hansen & Andersen, 2008). Dew (2011) presents a theory stating that low level of job satisfaction promotes sickness presenteeism. Claes (2011) confirmed this explanation in his study from four countries, where findings in two of the countries indicated satisfied employees did not go to work when they were ill. Dellve et al (2011) found positive association between effort-reward imbalance and presenteeism, meaning that if the effort one puts into work does not pay off in terms of reward, it would cause an imbalance, thus causing presenteeism.

3.2 Adjustment latitude

Adjustment latitude is a term used by Johns (2010). He explains the term as the employer's possibility to adjust or adapt his or her work tasks when attending work but not being 100% well. Two outcomes are also highlighted by Johns (2010); having adjustment latitude, an ill employee is inclined to show up at work but adapting his pace of work. However, the results of Aronsson and Gustafssons (2005) indicate the opposite, that less control over work pace

was associated with more presenteeism, which was not in compliance with the hypotheses the researchers based their study on. Three possible explanations for the unexpected results were suggested. First, that people with low control over work pace, had “poorer work” and were under greater financial pressure to attend work even when being ill. However, Aronsson and Gustafsson did adjust for personal financial situation. Second, people controlling their own work pace were healthier and were not at work when being ill simply because they were not ill. Aronsson and Gustafsson did also adjust for health status, but the results did not change. The third interpretation was that people controlling their own work pace and being able to adapt their pace of work, have a higher threshold for regarding themselves as being sick when present at work, compared to people with less ability to take control over their work pace.

Although Karaseks model does not look at sickness presenteeism specifically, the model does highlight the importance of employee control in the workplace. As his model illustrates (figure 4), little degree of work pace control is generally not associated with positive outcomes. Having control over ones work pace creates a positive circle of developing at work, making a desire to go to work and thereby reducing absenteeism. Looking at this in the perspective of sickness presenteeism, it is not unreasonable to assume that the same outcome would be valid also for sickness presenteeism.

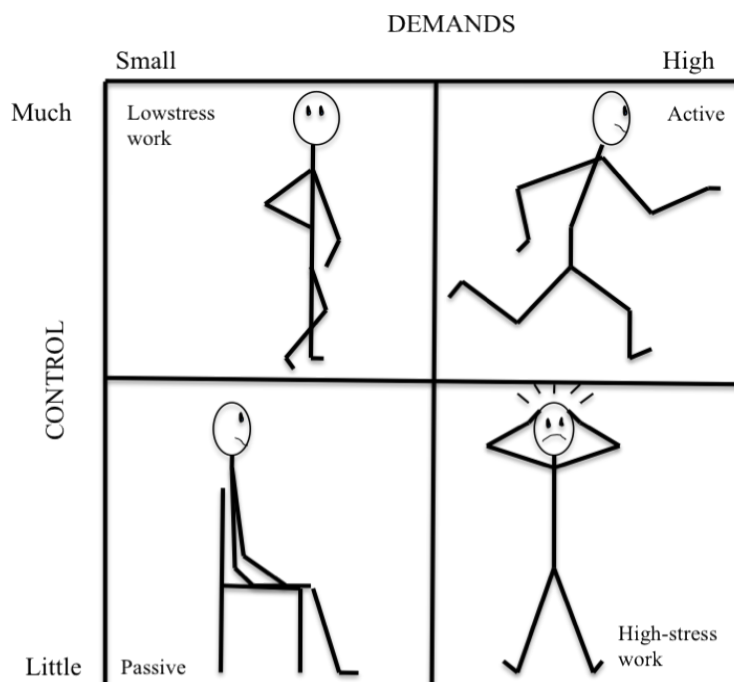


Figure 4: Karaseks Demand-Control-model (Eiken & Saksvik, 2006)

In the nursing occupation, most employees have a given amount of work tasks that has to be done and the workload is rarely flexible given the needs of an employee. If the amount of work were to be reduced as a result of the needs of an employee, it is likely that the workload would be transferred to co-workers.

3.3 Ease of replacement

Ease of replacement is understood in two different ways. Johns (2010) explains ease of replacement as “the amount of work that has to be redone when returning to work after absenteeism”. Others talk about ease of replacement as a threat, if there are lots of others that could easily do your job, you could feel pressured to go to work while being sick in fear of losing your job. When the term “ease of replacement” is used in this article, it is using Johns’ (2010) explanation, including the perspective of the workplaces’ use of substitutes. Johns argues that an employee would be inclined to attend work despite illness, because the work would be piling up. One of the key points in the study by Aronsson, Gustafsson and Dallner (2000) was that sickness presenteeism was related to being difficult to replace. McKevitt et al (1997) did a study on doctors and sick leave, finding results similar to these. One of the barriers towards sick leave was difficulty with arranging substitutes when an employee is absent, which lead to sickness presenteeism instead.

However, another important aspect of ease of replacement is how often the employers actually use substitutes. Even if others could easily take on your workload, it is not necessarily so that someone else would fill your position or that it would be possible to get a hold of someone to do it. In occupations where the job has to be done there and then, and there is low use of substitutes, the employee has the “choice” of giving their co-worker more workload by staying at home or going to work while being sick. In that way the lack of using substitutes could cause more workload on co-workers, thus promoting presenteeism.

3.4 Teamwork

In connection with sickness presenteeism, the degree of teamwork involved in ones job seems to influence the decision on going to work when being ill. Johns (2010) argues that teamwork seems to promote an obligation towards fellow members of the team, thereby promoting presenteeism. This is also highlighted by Grinyer and Singleton, pointing to the influence

teamwork and colleagues have on one's decision to attend work ill (Grinyer & Singleton, 2000). Their hypothesis was that a high level of cooperation between co-workers is similar to a higher level of presenteeism, and their study confirmed their hypothesis. Hansen and Andersen (2008) also confirmed this, presenting an idea of the size of the workplace as a source of impact. In small companies or workplaces, the employees often work closely and may be more dependent on each other. If one person is absent, his work tasks will often be shared between the employees who are present. In a qualitative approach to why nurse's work when being ill done by Crout, Chang and Cioffi (2005), the survey showed several respondents emphasizing the influence of cooperative nurses. This was especially true for the respondents in a small private hospital, where the employee count was low; all employees knew each other well and worked closely. One respondent said, "You don't want to let the team down", explaining the act of presenteeism. The others in this private hospital also confirmed this; being absent would be letting down co-workers. One staff member absent would mean that the rest of the team would be missing one staff member, thus being understaffed and causing more work and stress to the others. Similar findings were done by McKevitt et al (1997) showing that the burden of increased workload for co-workers would promote presenteeism and prevent absenteeism.

Grinyer and Singleton (2000) did a study of two public sector employment offices for comparison, using a two-stage process of both qualitative and quantitative approach to gather the research. One of the employment offices had been reorganized and was working in teams. During the qualitative research gathering several of the employees expressed that the teamwork had imposed additional pressure. Being a member of the team had also resulted in reluctance against taking sick leave and being absent from work. Grinyer and Singleton (2000) stated that working in teams could influence a reduction in short-term sick leave, but also accentuate sickness presenteeism. Kivimäki et al (2001) also found similar results for sickness absenteeism. Teamwork was the factor which had the greatest impact on sickness absence for the occupation group of physicians, but not for head nurses and ward sisters. Thus, bad teamwork featured as a contribution to sickness absenteeism and teamwork (Kivimäki et al., 2001).

4.0 DISCUSSION

This article addresses the term sickness presenteeism among nurses with a particular focus on which work-environmental factors that have the most influence. The nursing occupation has one of the highest levels of sickness presenteeism according to one study (Aronsson et al., 2000), indicating that some of the characteristics of the occupation substantiate sickness presenteeism. Using the three models presented earlier, we concluded that several factors affect the decision on going to work while being ill. This article only addresses the work related factors, focusing on the four factors presented by Johns (2010); job demands, adjustment latitude, ease of replacement and teamwork. It is still likely that work-related factors other than these could also influence and affect sickness presenteeism among nurses. At the same time, it is important to remember that the factors will also vary from one person to another. Job stress could, e.g. promote sickness presenteeism for one employee, while preventing it and rather encourage absence for another employee. At the same time, all factors will to some extent be correlated. This makes it difficult to determine with certainty which factors have the greatest influence on sickness presenteeism.

4.1 Job demands

The demands of ones job depends on the employment situation one is in, and will likely vary with different jobs and positions. The most striking characteristic of the nursing occupation is that most positions involve a high degree of working with people. This could make the job demands different than for occupations where there is no or less involvement with people. For nurses, we can imagine that demand does not only come top-down, or from ones manager - the demand could just as well come bottom-up, from the patients.

Time pressure is found to be in connection with higher probability of sickness presenteeism (Claes, 2011; Dellve et al., 2011; C. D. Hansen & Andersen, 2009). The fact that working long hours causes sickness presenteeism could indicate that employees working long hours also have a large workload. This workload could for example be an indication that the organization has too few employees, causing the employee to have a greater workload than he or she should. Since the health care sector in Norway and the other Scandinavian countries have been under economical pressure for a long time, the lack of employees and too large workload might be the everyday life for nurses (Aronsson et al., 2000). This increased pressure could affect employees, which again could lead to sickness presenteeism. On the

other hand, working more hours than what a normal workweek implies, could also indicate a special devotion to the work, which might be the reason why sickness presenteeism occurs. In other studies, time pressure or working long hours have also been associated with low degree of sickness presenteeism (Martinez & Ferreira, 2012). The reason for this could be that those who work longer hours have better health than those who work fewer hours, and thus are less ill. Or they might be better to evaluate their health condition and does stay at home when their condition indicates that they should not attend work. It could also be as simple, as the explanation of Aronsson and Gustafsson (2005), that these employees are less sick than the rest. Another possibility is that those who work long hours and do not have sickness presenteeism, work in positions where the time pressure is not too high. Let us use an example where an engineer works just as many hours as a nurse, but the pressure in the two occupations might be different. Working some extra hours in the afternoon might not be as tiring for the engineer as working extra hours after e.g. a night shift might be for the nurse. Often, engineers stand more freely to take breaks than nurses do, and might be able to grab a small meal before continuing work. This could be one example that might help explain why working long hours might cause sickness presenteeism or not. However, it could also simply be because of national differences. The study in which time pressure does not seem to cause sickness presenteeism is from a Portuguese public hospital (Martinez & Ferreira, 2012), while the results indicating the opposite, a connection between time pressure and sickness presenteeism, is from Scandinavian, Belgium, England and Spain (Claes, 2011; Dellve et al., 2011). It is not unlikely that differences in culture, geography or working environments within e.g. Northern-, Central- and Southern Europe matter.

High degree of job stress has also been associated with high levels of sickness presenteeism and employees in caring occupations are highlighted to be more exposed to job stress than employees in other occupation – which could be an explanation to why nurses have high level of sickness presenteeism (Elstad & Vabo, 2008). Let us use the example of comparing nurses and engineers again. An engineer might experience just as much pressure and stress at work as a nurse. But the difference is that nurses work with people and are often under a constant pressure in terms of not being able to postpone or choose to not attend to a patient when the patient requires care. Office-based engineers have the opportunity to take a one-minute brake almost whenever they choose to. The combination of the pressure nurses might experience and working mainly on the terms of the patients could make the job stress for a nurse worse

than for an engineer. At the same time it is likely that some job stress would be positive. In Karasek's demand-control model, too little demands (which could lead into job stress) is not a good combination and either is having too much demands. I think having the right amount of job stress, could be positive and promote a good work environment, promote good health and reduce employees attending work when they are ill. At the same time it is not unlikely that what we define as a stressful situation and where the line is for too much job stress is highly individual. It can therefore be difficult to say exactly when job stress might cause sickness presenteeism. Perhaps are engineers better than nurses at handling job stress? Another theory is that employees exposed to sickness presenteeism are also more exposed to job stress - meaning job stress does not cause sickness presenteeism, but rather that those who compel themselves to work while being ill might also be more sensitive to stress at work.

Job insecurity and job satisfaction were among the other job demands that were listed in the literature. Hansen and Andersen (2008) highlight that the fear of losing one's job works as a motivation for being present at work, thus causing higher level of sickness presenteeism. This has proven valid particularly in times of high unemployment (Claus D. Hansen & Andersen, 2008). It would not be unnatural to assume that one works harder and strive to make a good impression if one knows one is at risk of being downsized. Employees with a history of absence are often regarded as less profitable, and could be the first ones to go when companies are forced to downsizing. This being said – the higher levels of sickness presenteeism in times of downsizing does not necessarily reflect the idea that one strives to do ones best in such times. After all, attending work while being ill might cause reduced performance.

A low degree of job satisfaction has also been associated with employees going to work while being ill, while those who are satisfied with their jobs seems to stay at home (Claes, 2011; Dew, 2011). This could easily be found surprising, as one might think that a low degree of job satisfaction prevents sickness presenteeism because of people rather wanting to stay at home. If you are not satisfied with your work, any degree of sickness could be seen as a welcome reason to stay at home. The ones that are satisfied with their job however, would be more inclined to attend work, which could be due to seeing their colleagues, performing satisfying tasks or simply being at a place one enjoys. One reason why the results of Claes (2011) and Dew (2011) go against these assumptions might be that unsatisfied employees might be

considering a change of jobs, thus wanting to make a good impression. Either way, these results could indicate that we consider our health differently if we are satisfied with our job, compared to if we are not.

4.2 Adjustment latitude

High adjustment latitude has been associated with both high and low probability for sickness presenteeism (Aronsson & Gustafsson, 2005; Johns, 2010). The common hypothesis has been that high adjustment latitude would be associated with a high degree of sickness presenteeism, as the possibility to adjust ones own work tasks would initially seem to make it easier also to adapt the work tasks to the relevant health condition one is in. It has also been suggested that more control over work pace would make the employees able to adapt their pace of work continuously, thus developing a higher threshold for going to work ill.

The connection between high adjustment latitude and low sickness presenteeism could have something to do with the same reasons previously discussed for why time pressure is associated with low degree of sickness presenteeism. It may be that those who experience high control over work tasks and are able to adapt, are better to evaluate when they should be at home – they know themselves well enough to know both which work load is suitable and when to rest. One of the interpretations Aronsson and Gustafsson (2005) proposed from their results was that employees with low control over their work had “poorer work”, i.e. work carrying lower societal status and less pay, which in turn would suggest that they were also under financial pressure to attend work when being ill. These results remained even when it was corrected for financial situation. But in Norway and the rest of the Nordic countries, being absent from work will generally not influence the financial situation of an employee. The social security systems of these countries give every employee a right to the same payment when sick and absent from work as when at work – within reasonable limits. At least in these countries, this is one of the ways in which the nursing occupation stands out. As a result of the lack of resources within the health sector, many nurses are only offered part-time employment, forcing them to fill up the rest of their working capacity with “voluntary” shift work. The shifts are often distributed on a short-term basis, and being ill does not necessary make the nurse eligible for sick pay. This will in turn be an incentive for more sickness presenteeism among nurses.

As already stated, nurses are in kind of a delicate situation as their work tasks often have to be done at a certain time and place. We may describe their work tasks as “here-and-now”, because there will be other tasks that can only be done “there-and-then” tomorrow. This makes adjustment latitude less relevant for nurses, as they will merely be able to adapt their workload at all, which in turn would call for a lower amount of sickness presenteeism among nurses. This could be one of the reasons why employees with low adjustment latitude have less sickness presenteeism as Johns (2010) suggested, but it certainly does not explain why nurses have one of the highest levels of sickness presenteeism. This could indicate that something else is the major influencing factor for nurses to come to work or not when they are sick.

4.3 Ease of replacement

In Johns (2010) definition of ease of replacement, as the work that has to be redone when returning to work, this would rarely concern nurses. As discussed, the tasks of a nurse are mainly “here-and-now”-tasks, and they are not likely to be postponed to another day. Even if this will possibly increase the workload of the other nurses on duty, this might also be seen as a convenient situation that not many occupations have. Let us once more use engineers as an example. Their work tasks will largely neither be done by co-workers (at least not in most cases) nor disappear, but will still be there waiting for the engineer when he gets back. Being able to stay at home without having to redo the work tasks at a later time is, seen this way, an incentive not to practice sickness presenteeism. On the other hand, having to redo work when returning, would promote sickness presenteeism, as any effort in working while being ill will reduce the amount of work waiting for you to get back. Using this definition of ease of replacement, it does certainly not explain why nurses have high levels of sickness presenteeism.

However, this understanding of the term does not always give a correct representation of the work situation nurses often may have. As mentioned, the term could also be explained as how easily other employees could replace one. Most nurses often do the same work, only at different locations or at different hours. This would mean that nurses are easily replaced. If a nurse quit her job, another nurse could easily replace her quite fast. Still, one of the main issues in the health care sector is the lack of skilled employees (Watson, 2005). So even if another nurse could theoretically do the same tasks, it might not be easy to find that other,

available, nurse – at least not for long-term employments. In a short-term absence, this would probably not be an issue.

Still, theory and practice are often different, and even if it would be easy to replace a nurse, this does not guarantee that the employer is going to want a replacement. As the health care sector has been under financial pressure in Scandinavia (Aronsson et al., 2000), some employers might try saving expenses by not using substitutes every time an employee is absent. This would create a greater workload for co-workers, because the work tasks still need to be done at that specific time and place. If employers of engineers chose not to use substitutes when the engineer is absent, as they probably would, it might not cause more work for co-workers, rather a postponed workload for the engineer himself, as discussed. This difference introduces the next topic, which is the teamwork consequences of sickness presenteeism.

4.4 Teamwork

Working in teams or close to other co-workers has been pointed out to have an influence on the decision of going to work when being ill by several researchers (Grinyer & Singleton, 2000; Claus D. Hansen & Andersen, 2008; Johns, 2010). This applies to nurses as well (Crout et al., 2005). The basis of this relevance lies in the added obligation an employee can feel when being part of a team. In theory, almost everyone works as part of a team, but when the size of the team is reduced, we get more aware of the fact that we are a part of the team. At the same time it is likely that employees feel a stronger ownership and responsibility for the work they do when working in smaller groups. The smaller the team is, the more noticeable the absence of an employee will be. Most team members tend to follow the said and unsaid norms that come with a team-working situation. If absence is not accepted, or the norm is to attend work even if you are ill, the team members will most likely act according to this.

Additionally, if the absence of the employees causes more work for the co-workers, it is not unlikely that the employees will feel obligated to attend work - even when they are not well. The people you work closely with often become friends or at least closer co-workers, and we could imagine an employee would rarely want to let his or her friends down or give them additional workload by being absent. This would be a familiar situation for most nurses. Let

us imagine that an employer does not hire substitutes when an employee is absent. The employee can then choose between pressuring himself into going to work, or staying at home while his co-workers will have to do his work. The employee might also have patients who are relying on his attendance, and who might not get the care they need if he is absent. A nurse could obviously feel an extra obligation to patients whom they have been caring for over a longer period. This would of course depend on the context of the care, e.g. when working in an emergency room where there is a frequent replacement of the patients as opposed to divisions where patients stay for longer. This situation would probably not be the same in other occupations, for an engineer the absence might not influence the co-workers work tasks at all, and thus, e.g. engineers might not feel the same obligation.

It is also important to remember that there are different kinds of teamwork. Kivimaki (2001) highlights the advantages and disadvantages to teamwork when it appears as a positive thing or teamwork when it appears as a negative thing. Working in a team where you do not get along with your co-workers, will probably not promote presenteeism. In that case it might even prevent presenteeism, and thus also promote absence. Who would want to pressure themselves to attend work when being ill, if they do not get along with their co-workers? However, not getting along with ones co-workers might also cause someone not to want to be absent. If you already feel you do not get along, you might not want to be the one who is “always sick”, and maybe you would rather be the one who at least is never sick. Whether the teamwork is good or bad could be difficult to determine, as different team members might have different experiences. Some might thrive, and find the teamwork a good experience, while others in the same team might have a poorer experience. If the teamwork is good or bad, and whether the employee likes his co-workers or not cannot be seen as features only found among nurses. These would probably be concepts that could occur in most occupations.

One of the characteristics of the nursing occupation is however the frequency of working in teams. This is not unlike other occupations, but nursing might often involve a different kind of teamwork. One of the characteristics of teamwork is relying on other team members to do part of the job – in between your own tasks or simultaneously. The nursing occupation seems to differ in the way that a larger portion of the teamwork is done in plural, and that two or more employees need to work simultaneously on the same task. For example if the morning routines of one patient are to lift the patient into bed or to support and wash the patient, no

one employee could do this single-handed. Nurses too can do some of the tasks by themselves, but if your absence makes it difficult for others to do their work, you might feel more obliged to attend work even if you should be at home.

5.0 CONCLUSION

The purpose of this article is to present the theoretical fundament for the term sickness presenteeism and investigate what work-environmental factors that might influence sickness presenteeism, among nurses in particular. The research shows that all the four chosen factors; job demands, adjustment latitude, ease of replacement and teamwork, could have an influence on sickness presenteeism among nurses. These four factors and their association to the occupational characteristics of nurses are discussed. Additionally, it seems like there are many factors that will affect the decision of an employee on going to work when he is ill, which also reflects what is said in the three main models of presenteeism already found in theory.

The research found on nurses and sickness presenteeism is very limited, even though the interest concerning this has been growing during the last decade. Increasing knowledge on why and what causes sickness presenteeism among nurses and whether or not there are differences between occupational groups would be interesting to explore further. It would also be interesting to take these four work-environmental factors and examine closer if the results also represent Norwegian nurses since little of the research comes from Norway. This will be the theme for the second article in this master thesis. More knowledge about sickness presenteeism based on Norwegian work conditions is both necessary and important to understand and improve the work-life of nurses.

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**The effect of working-time arrangements, use of
substitutes and working relationship on sickness
presenteeism**

A study among nurses at a Norwegian hospital

Abstract

Aim: The main aim of this study is to assess how work-environmental factors influence sickness presenteeism among nurses. Three factors were chosen: *working-time arrangement*, *use of substitutes* and *working relationship*, in combination with background questions. Three hypotheses were developed based on the three work-environmental factors and used to conduct the analyses. **Method:** A cross-sectional design was chosen to study sickness presenteeism among nurses working at St. Olavs hospital in Norway. A request for an online survey was sent by e-mail to all nurses employed at the hospital during February and March 2013. 1610 nurses responded to the survey, revealing a response-rate of 42.5 per cent. Three analyses were done: Simple frequencies, cross tabulation with a chi square test and binary logistic regression analysis. **Results:** 75% of the nurses reported to have gone to work despite being ill during the last twelve months, most of them reporting it to have occurred between two and five times. Absence and use of substitutes seem to be positively related to sickness presenteeism. **Conclusion:** Sickness presenteeism seems to be a frequently occurring phenomenon among nurses, where having absence and low substitutes use in the workplace are factors positively related to sickness presenteeism.

Keywords: Sickness presenteeism, nurses, work-environmental factors, working-time arrangement, use of substitutes, working relationship.

1.0 INTRODUCTION

Sickness presenteeism is explained as the act of going to work despite being ill (Aronsson, Gustafsson and Dallner 2000). Employees working in care occupations involving direct contact with other people, such as nurses, have been thought of as having very high levels of sickness presenteeism (Aronsson, Gustafsson, & Dallner, 2000; Letvak, Ruhm, & Gupta, 2012; Martinez & Ferreira, 2012; Widera, Chang, & Chen, 2010).

Going to work despite being ill may result in negative consequences for the employee. Sickness presenteeism have been associated with both decreasing health in general and work-related burn-outs (Dellve, Hadzibajramovic, & Ahlborg, 2011; Dew, 2011; Ferreira et al., 2006; Johns, 2010; Martinez & Ferreira, 2012; Umann, Guido, & Grazziano, 2012). It is also well-known that sickness presenteeism may cause even more sickness presenteeism, and potentially more frequent and extended duration of absence from work (Aronsson et al., 2000). Additionally, when a nurse attends work despite being ill, studies seem to show that quality of the care decreases and that the risk of medical errors increases (Martinez & Ferreira, 2012). Sickness presenteeism among nurses has also been seen specifically in connection with a higher risk of patient falls (Letvak et al., 2012).

One characteristic of the nursing occupation is that it involves a constant need from the patients, causing a need for nurses around the clock. Little research has been done on the crossing of sickness presenteeism and shift works, but the working-time arrangement could be one of the reasons behind the high levels of sickness presenteeism within this occupation. Shift work has in itself been associated with several negative consequences related to health (Harrington, 1994; Jansen, Van Amelsvoort, Kristensen, Van den Brandt, & Kant, 2003; van der Hulst, 2003). Even though no research has been done to find a link between sickness presenteeism and shift work, both shift work and different working-time arrangements have proven to be a factor for absence (Merkus et al., 2012), a fact that could indicate an influence on sickness presenteeism as well.

In the health care sector, it is not unusual to try and maintain operation without using substitutes when an employee is absent, often intended to keep expenses at a minimum. The result is often increased workload for the employees still present at work. This could make the employee feel an obligation to attend work when being ill, even though he or she might be

better off at home (Crout, Chang, & Cioffi, 2005; McKeivitt, Morgan, Dundas, & Holland, 1997). The act of sickness presenteeism has also been shown to be more likely when employees work closely in teams (Grinyer & Singleton, 2000; Hansen & Andersen, 2008). It seems that when employees work closely and have a high level of cooperating with other co-workers, they feel an obligation to attend work despite illness (Grinyer & Singleton, 2000; Hansen & Andersen, 2008; Johns, 2010). “Bad” teamwork has additionally been associated with increasing absence for the employees (Kivimäki et al., 2001), which could indicate that good teamwork reduces absence and therefore appear promoting towards sickness presenteeism.

1.1 Aim and hypotheses:

The main aim of this study is to assess how work-environmental factors influence sickness presenteeism among nurses. Based on earlier research and expected results, three research hypotheses were developed to specify the main aims for the study:

H₁: Working-time arrangements have an influence on sickness presenteeism

H₂: Low extent of using substitutes is related to higher level of sickness presenteeism

H₃: Good working relationship between co-workers is related to higher level of sickness presenteeism

2.0 METHOD

2.1 Study design

The present study is carried out with a cross-sectional design. Data was collected from nurses working at St. Olavs Hospital in Trondheim, Norway, during February and March 2013. Information from the nurses was collected in an online survey, to which the request was sent by e-mail to the participants. After one week a reminder was sent to all nurses, giving the respondents a total of two weeks to participate before the survey was closed and removed from the Internet.

2.2 Participants

St. Olavs hospital consists of 19 clinics and divisions, with a total of 3786 employed nurses. The request to participate was sent to all the nurses currently employed, where a total of 1610

nurses responded, a respondent rate of 42.5 percent. Nurses who was on long term sick leave or other types of permanent leave was asked not to participate in the study, leaving only the nurses who was fully or partially in labour at the time of the study. 67 mail accounts auto-responded that they were not-in-use, and these nurses were therefore excluded. Some of the respondents did not answer all of the questions, but their response was kept in the sample as long as they had answered at least one question.

2.3 Measures

Dependent variable:

Sickness presenteeism was measured by using a single self-report question in the survey: “Have you during the last 12 months attended work, feeling you should have been at home due to your health condition?”, the response categories being “No, never”, “Yes, once”, “Yes, 2 – 5 times” and “Yes more than 5 times”. A similar question has been used in several other studies to determine sickness presenteeism (Aronsson & Gustafsson, 2005; Aronsson et al., 2000; Claes, 2011; Dellve et al., 2011). In the main analysis, the three last categories were combined into one category measuring the nurses who reported to have performed sickness presenteeism. This split was done to make it easier to separate the nurses who had been present despite being ill from those who had not, thus making it easier to conduct the following analysis. The two categories will be presented as “No sickness presenteeism” and “Sickness presenteeism”. However, the frequencies of having sickness presenteeism (“Yes, once”, “Yes, 2 – 5 times” and “Yes, more than 5 times”) will also be presented, to include perspective on how often sickness presenteeism have occurred during the last twelve months among the nurses.

Background variables:

Three background variables were mapped in the analyses. These were “Sex”, “Influence on working time” (“Not at all”, “very little so”, “to some extent”, “very much so”) and “Absence” (“Yes, with personal declaration¹”, “Yes, with sick leave certification¹”, “Yes, with both”, “No, have not been absent”). These factors were included because several factors are known

¹ The term ”personal declaration” and ”sick leave certification” is obtained from The Norwegian Labour and Welfare Administration (NAV), and is their use of the Norwegian terms ”egenmelding” and ”sykemelding”).

from beforehand to influence sickness presenteeism. In some studies, female employees seem to be more exposed to sickness presenteeism than male employees (Aronsson & Gustafsson, 2005; McKeivitt et al., 1997), while others have found opposite correlations and no difference between the genders (Johns, 2010; Martinez & Ferreira, 2012). Sickness presenteeism has also shown to relate to absence from work and being on sick leave, where absence seems to increase sickness presenteeism (Dellve et al., 2011; Dew, Keefe, & Small, 2005).

Additionally, it seems as if the act of sickness presenteeism is less likely to occur when the employee has a high influence on their pace of work (Aronsson & Gustafsson, 2005), which is the reason for including the last background variable in this study.

Work-environmental factors:

The work-environmental factors investigated in this study are *working-time arrangements*, *use of substitutes* and *working relationship*. To determine working-time arrangement three questions were asked. The first question was “*What kind of working-time arrangement have you got*” (from now on presented as “working-time”), possible responses being “*Only daytime*”, “*Only night-time*”, “*Two-divided shifts*”, “*Three-divided shifts*” and “*Only evenings/weekends*”. This variable was chosen because it would give a good indication on the most common working-time arrangement in the nursing occupation (Nabe-Nielsen, Garde, Jensen, Borg, & Høgh, 2007). The participants had the opportunity to select “*Other*” and explain their working-time arrangement in a separate field. The two other questions were about *full-time* versus *part-time* employment and *permanent* versus *temporary* employment. The participants could reply “*Other*” to these two questions as well.

The use of substitutes was measured by asking “*If you are absent from work, would you be replaced by a substitute?*”. The responses were “*Never*”, “*Rarely*”, “*Often*” and “*Always*”. This variable is presented as “*Use of substitutes*” through the study.

Two questions determined what is referred to as “*Working relationship*”. The first question determined the social environment at the workplace, asking “*How would you describe the social environment at your workplace?*” The second question measured well-being among co-workers by asking “*How satisfied are you among your co-workers?*” Both items had the responses “*Very bad*”, “*Bad*”, “*Good*”, “*Very good*”. When using the term “*working relationship*” later on in the article, it is referring to the social aspect of the working

relationship between the nurses.

2.4 Missing data

Missing data, i.e. the participation of nurses not responding to any questions, was excluded in all analyses. Thus, it is implicitly assumed that the response from the responding nurses would not have differed from the response from the non-responding nurses. Three of the variables regarding the work-environmental factors had the response category “Other”, making it possible for the nurses to specify their own answer. This response category was excluded in all of the analyses, because the responses in this category were mostly different variations of the possible response options, therefore making it difficult to compare with the established response categories. The outcome of this will be discussed further on in the discussion part.

2.5 Statistical analyses

Three types of analyses were performed. Simple frequencies were done for all the variables to get a perspective on the distribution. To investigate whether there is relationship between sickness presenteeism and the background variable or not, and the same between sickness presenteeism and the work-environmental factors, a cross tabulation with a chi-square test was conducted.

A binary logistic regression analysis was performed to examine the association between the work-environmental factors and sickness presenteeism. The analysis was conducted using an enter method where the independent variable was added in one single block. The three background variables were entered first followed by the three work-environmental factors. The last response category in each of the independent variable was used as a reference category. To conduct the regression analysis, categories with less than 5% responses was excluded. In practice this only excluded the category of “very bad/bad” for “working relationship”. All the independent variables used in the regression analyses were tested for multicollinearity, where this was not found. The results of the binary logistic regression are presented in table 3, using Odds Ratio with a confidence interval (CI) of 95%. Nagelkerke R^2 is also presented, in an attempt to evaluate the goodness of fit with the model.

For both the chi-square test and the binary logistic analysis a P-value of 5% or less was

considered as statistically significant. Statistic analyses were conducted using Statistical Package for the Social Sciences (SPSS) version 20 for Mac.

2.6 Ethical consideration

The Regional Ethical Committee has evaluated this project and concluded that the project does not involve areas that need approval from the ethical committee. The project has also been reported to the Norwegian Social Science Data Service (NSD) because of the use of a computer-based questionnaire. It is not possible to recognize individual informants in the data and the survey was deleted from the Internet after the survey was done. The respondents were addressed by e-mail, with the employer as an intermediary, and they were informed of the voluntary participation. Since the e-mail was sent from the employer, the employees could feel pressured to participate; consequently it was made clear that the project was to be used as a master project and not for the employer.

3.0 RESULTS

The sample consists mainly of female nurses, only 10 % of the respondents being male. 7.6% choose not answer the question about sex. Most of the nurses were in the age 40-49 years, and the average experience working as nurses was 15 years. A wide range of nurses from all the different clinics of the hospital responded.

3.1 Sickness presenteeism

Table 1: Distribution of sickness presenteeism. *“Have you during the last 12 months attended work, feeling you should have been at home due to your health condition?”*

Response category	%	N
Yes	78.2	1219
No	21.8	339

The distribution of sickness presenteeism, with the percentage results of those who reported to have had sickness presenteeism and those who reported not to during the last twelve months is presented in table 1. From the table we can see that the majority of the nurses reported to have had sickness presenteeism during the last twelve months. The result confirms that there is a high level of sickness presenteeism among nurses in this Norwegian hospital.

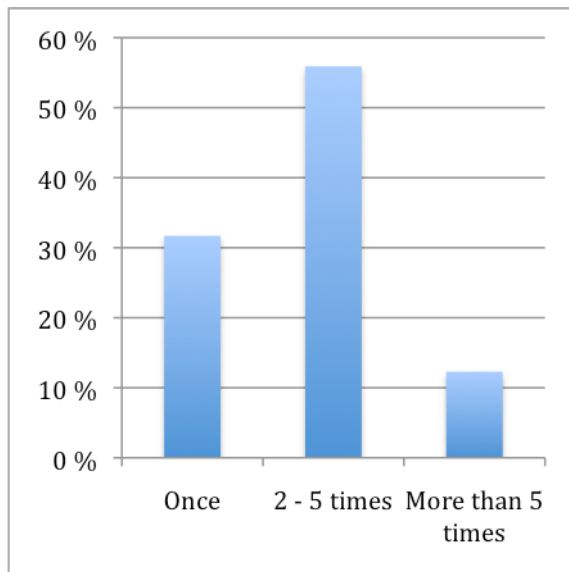


Figure 1: The distribution of occurred sickness presenteeism.

Figure 1 presents the frequency of sickness presenteeism occurring among those who reported to have had sickness presenteeism during the last twelve months (those who form the “Yes”-group of table 1). The figure illustrates that most of the nurses reported an occurrence of sickness presenteeism between two and five times during the last year. Only approximately thirty percent of the nurses reported sickness presenteeism to have occurred only once and only approximately ten percent of the nurses reported sickness presenteeism to have occurred more than five times.

3.2 Background variables

Table 2: A representation of percentage sickness presenteeism, sex, age and influence on working time

Have you during the last 12 months attended work, feeling you should have been at home due to your health condition?	No sickness presenteeism %	Sickness presenteeism %	N	P-value
Sex:				0.112
Female	21.80	78.20	1280	
Male	27.30	72.20	165	
Influence on working time:				0.002**
Not at all	17.90	82.10	549	
Very little so	19.60	80.40	562	
To some extent	26.80	73.20	299	
Very much so	31.20	68.80	80	
Absence:				0.000***
Yes, with personal declaration	20.30	79.70	778	
Yes, with sick leave certificate	22.10	77.90	163	
Yes, with both	11.50	88.50	375	
No have not been absent	41.70	58.30	235	

*P-value less than 0.05, ** P-value less than 0.01 and *** P-value less than 0.001

In table 2 the three background variables are presented in combination with sickness presenteeism, including a P-value found by use of a chi-square test of independence. The table shows that two of the variables are significant: Influence on working time had a significant association to sickness presenteeism $X^2(3) = 15.01, p < 0.05$. So did also absence, who had a significant association to sickness presenteeism $X^2(3) = 79.61, p < 0.001$. Sex does not emerge as a significant variable, which indicates that there is no difference between male and female nurses in connection to sickness presenteeism.

Influence on working time related to sickness presenteeism is visualised in figure 2. Using the figure, we can see an indication of a reduction of sickness presenteeism the more influence on their own working time the nurses report to have. For those who reported not to have had sickness presenteeism at all, the results are the opposite. Those who reported to have very much influence on their working time seem to have a higher probability for not having sickness presenteeism. Figure 3 presents the results of absence and sickness presenteeism. The results indicate that nurses with any of the three varieties of absence also have high levels of sickness presenteeism. The nurses who reported to not have been absent during the last twelve months, have the highest probability not to have any sickness presenteeism, and the lowest probability for sickness presenteeism, compared with those who have absence of different kinds.

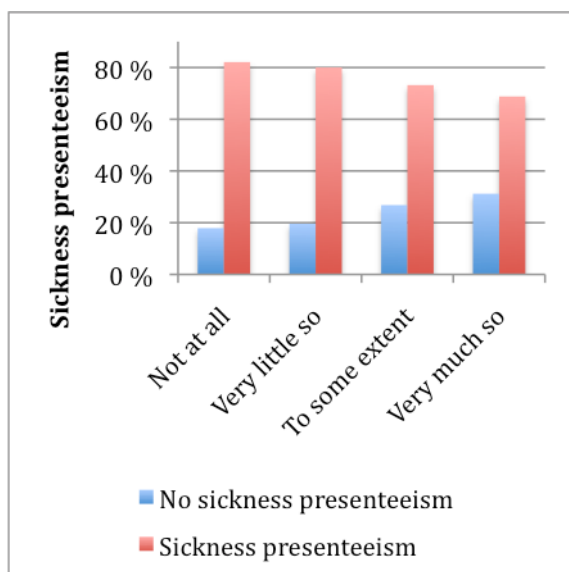


Figure 2: Sickness presenteeism and influence on working time

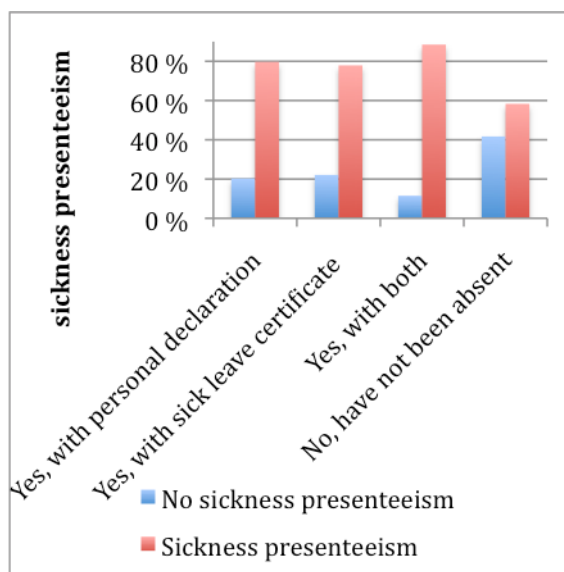


Figure 3: Sickness presenteeism and absence

3.3 Work-environmental factors

Table 3: Distribution of working-time arrangement

Response category:	%	N
Working-time:		
Only daytime	23.7	351
Only night-time	10.6	157
Two-divided shifts	28.4	420
Three-divided shifts	37.0	548
Only evening/weekends	0.3	4
Full-time/part-time employment:		
Full-time	58.8	888
Part-time	41.2	623
Permanent/temporary employment:		
Permanent	89.1	1399
Temporary	10.9	172

The distribution of the factors that constitutes working-time arrangement is presented in table 3. The factor “Working-time” was divided in to five different working-time arrangements, with the possibility to choose “other” and specify what kind of working-time arrangement they had. The majority of the nurses worked three-divided shifts, while many also worked two-divided shifts or only daytime. Few worked only night-time and a very small portion of the nurses worked only evenings or weekends. Many of the nurses who replied “Other”

commented to have combinations of the current working-time arrangements already suggested in the response categories. In addition, it seems like the nurses have got working-time arrangements that was not taken into account in this survey, such as “home-shift” where they could be called out to work if needed. Others reported specific working-time arrangements such as “day and night”, “daytime combined with weekends” and “nights and evenings”.

The table also illustrates that the majority of nurses were employed in full-time positions, although the difference between the number of nurses employed in full-time and part-time positions was quite low. Most of the answers to “Others” within this question contained, as for the question on permanent and temporary employment, specified positions divided between several workplaces “50% here and 50% in the municipality” and other distributions “60% in work and 40% retired”.

Regarding permanent and temporary employment, the majority of the nurses are employed in permanent positions, and only a few are temporarily employed. This answer did also allow the nurses to choose “Other” and comment. The comments maintained specifics on their employment such as “20% is not permanent”, “90% permanent and 10% temporary” and “Permanent employment at St. Olavs hospital, but not at the clinic.

Table 4: Distribution of use of substitutes

Response category:	%	N
Never	17.4	260
Rarely	33.8	505
Often	39.0	583
Always	9.9	148

Table 4 shows how the nurses reported the use of substitutes upon their absence from work. The majority reported that substitutes were used often, but only somewhat fewer reported it to rarely be used. Among the nurses, fewest (only 9.9 percent) reported that substitutes were always used when they were absent from work.

Table 5: Distribution of working relationship

Response category:	%	N
Very bad	0.1	1
Bad	0.7	10
Good	40.3	610
Very good	59	894

The distribution of the new variable of working relationship is presented in table 5. The majority, almost all of the nurses, reports having good or very good working relationships. Only a very small share reports the working relationship to be bad or very bad.

Table 6: The work-environmental factors in relation with sickness presenteeism

Have you during the last 12 months attended work, feeling you should have been at home due to your health condition?	No sickness presenteeism %	Sickness presenteeism %	N	P-value
Working-time				0.428
Only daytime	22,10	77.90	344	
Only night-time	17,80	82.20	157	
Two-divided shifts	23.30	76.70	416	
Three-divided shifts	22.40	77.60	536	
Only evening/weekends	50	50	4	
Full-time/part-time employment				0.650
Full-time	22.00	78.00	873	
Part-time	21.00	79.00	614	
Permanent/temporary employment:				0.157
Permanent	21.30	78.70	1377	
Temporary	26.00	74.00	169	
Use of substitutes:				0.177
Never	19.40	80.60	258	
Rarely	18.70	81.30	503	
Often	22.70	77.30	578	
Always	25.70	74.30	148	
Working relationship:				0.009*
Very bad/bad	0	100	11	
Good	18.40	81.60	604	
Very good	23.80	76.20	890	

*P-value less than 0.05, ** P-value less than 0.01 and *** P-value less than 0.001

A chi-square test of independence was performed to investigate the relationship between the work-environmental factors and sickness presenteeism. The result is presented in table 6. The response categories "Very bad" and "Bad" in "Working relationship" was conducted in this analysis, due to the low response rate. Working relationship was the only variable that came out to be significant ($X^2(2) = 9.35, p < 0.05$). This means that there is a connection between how the nurses describe their working relationship and whether or not they have experienced

sickness presenteeism. None of the other work-environmental factors were significant, so even though we could see trends of differences, they are most likely coincidences.

3.4 Logistical regression

Table 7: Logistic regression analysis of sickness presenteeism.

Have you during the last 12 months attended work, feeling you should have been at home due to your health condition?	95% CI for Odds Ratio				
	B (SE)	Lower	Odds Ratio	Upper	P- value
Constant	-2.94 (1.36)				0.031
Sex:					
Female	0.22 (0.23)	0.80	1.25	1.95	0.325
Male ±					
Absence:					0.000***
Yes, with personal declaration	1.06 (0.19)	1.99	2.88	4.16	0.000***
Yes, with sick leave certificate	0.93 (0.27)	1.49	2.54	4.32	0.001***
Yes, with both	1.96 (0.26)	4.30	7.09	11.69	0.000***
No have not been absent ±					
Influence on working time:					0.127
Not at all	0.60 (0.34)	0.94	1.83	3.56	0.076
Very little so	0.49 (0.33)	0.86	1.64	3.13	0.136
To some extent	0.17 (0.33)	0.62	1.19	2.27	0.603
Very much so ±					
Working-time:					0.256
Only daytime	1.67 (.127)	0.44	5.33	64.36	0.188
Only night-time	2.01 (1.28)	0.66	8.16	100.52	0.101
Two-divided shifts	1.62 (1.26)	0.43	5.03	59.23	0.199
Three-divided shifts	1.87 (1.26)	0.55	6.49	76.43	0.137
Only evening/weekends ±					
Full-time/part-time employment:					
Full-time	-0.05 (0.17)	0.68	0.95	1.33	0.771
Part-time ±					
Permanent/temporary employment:					
Permanent	0.14 (0.23)	0.73	1.15	1.8	0.556
Temporary ±					
Use of substitutes:					0.015*
Never	1.26 (0.39)	1.63	3.52	7.60	0.001***
Rarely	0.74 (0.30)	1.16	2.10	3.80	0.014*
Often	0.53 (0.28)	0.99	1.70	2.92	0.056
Always ±					
Working relationship:					0.511
Good	0.18 (0.15)	0.88	1.20	1.61	0.246
Very good ±					

Note: $R^2 = 0.07$ (Hosmer & Lemershow), 0.08 (Cox & Snell), 0.12 (Nagelkerke). Model $X^2(18) = 94.94$. *P-value less than 0.05, ** P-value less than 0.01 and *** P-value less than 0.001
The reference category is marked: ±

The result from the binary logistic regression analysis is presented in table 7. When looking at the P-value in this analysis, we can see that use of substitutes and absence is the only two

variables that are significant in connection with sickness presenteeism. Both the variables have a positive regression coefficient, which indicates a probability of increasing sickness presenteeism. However, the significance does not occur when the use of substitute happens often during the absence of the nurses. Meaning that in cases where substitutes are never or rarely used, the nurses are more likely to go to work when being ill than in cases where substitutes are always used. Both the significant variables have an Odds ratio larger than 1, which indicates a greater possibility for sickness presenteeism than for no sickness presenteeism. Using Nagelkerke R^2 to determine the effect size for the model indicates little effect, the chosen variables only explaining 12%. This indicates that there are other things that might influence sickness presenteeism other than absence and the use of substitutes.

Due to the results, the second hypothesis can be maintained (H_2): Low use of substitutes is related to higher level of sickness presenteeism. The first hypothesis (H_1), that covered the influence working-time arrangements might have on sickness presenteeism, is rejected along with the third hypothesis (H_3), stating that a good working relationship between co-workers would be related to high level of sickness presenteeism.

4.0 DISCUSSION

This study explains how the three work-environment factors *working-time arrangements*, *use of substitutes* and *working relationship* influences sickness presenteeism among nurses. 75% of all the nurses in this study reported to have gone to work while ill once or more than once during the last twelve months. The majority of nurses reported that sickness presenteeism had occurred between two and five times during this period. The binary logistic regression analysis indicates that both absence and the extent to which the employer use substitutes when a nurse is absent are positively related to sickness presenteeism. Working-time arrangement and working relationship do not seem to have an impact on sickness presenteeism among nurses, and neither does the gender of the nurses nor to what extend they have an influence on their own working time.

High level of sickness presenteeism

The results of this study confirm a high level of sickness presenteeism, as much as 75 percent of the nurses report to have attended work despite being ill during the last twelve months.

This was an expected result, nurses being one of the group of occupations most exposed to sickness presenteeism (Aronsson et al., 2000). Even though the results from Aronsson et al (2000) implied that only one third of the sample had attended work despite being ill, other studies have revealed higher levels of sickness presenteeism. Particularly studies concerning employees in the health care sector reveal higher numbers of sickness presenteeism (Elstad & Vabo, 2008; McKevitt et al., 1997). In a survey among employees in the Nordic elderly care, 80% of the respondents reported to have had sickness presenteeism during the last twelve months (Elstad & Vabo, 2008), and these same high levels have also been seen among doctors in England (McKevitt et al., 1997).

The study also revealed that sickness presenteeism was happening quite often among the nurses. The majority reported it to have occurred between two and five times during the last twelve months. The repeated act of sickness presenteeism could indicate a habit to attend work while being ill among nurses. One explanation could be that this has become an accepted behaviour in the workplace (McKevitt et al., 1997). Such an acceptance could create a barrier towards being absent, thus promoting sickness presenteeism among the nurses.

A study by McKevitt et al. (1997) also discusses if doctors have difficulties taking on the role of patients. If this is true, it will possibly also apply to nurses. We could imagine that the nurses do not want to identify themselves as someone who is ill, i.e. “I am a nurse – I help others who are sick, I do not get sick myself”, as if sickness did not exist for nurses. Additionally, Dellve et al (2011) presents an altruistic explanation to the act of sickness presenteeism among nurses. The idea is that nurses might not have their own interest in mind when attending work while being ill, but rather the interest of their patients or co-workers. Knowing that your absence could affect the care given to patients or increasing the workload of your co-workers could affect the conscience of the nurses, stopping them from being absent and rather going to work ill – a conscience perhaps not present in the same way in office-based occupations. This precise explanation will be discussed further on in the article.

Absence

The results in this study presented a positive relation between absence and sickness presenteeism. This means that nurses who had been absent (with personal declaration, using sick leave certificate, or a combination of the two) showed higher probabilities for sickness

presenteeism than nurses who had not been absent at all. Similar results of high sickness absence in combination with sickness presenteeism have been found in other studies as well (Aronsson & Gustafsson, 2005; Dellve et al., 2011; Hansen & Andersen, 2008).

One reason why sickness presenteeism and absence seems to be related could be the simple explanation that absence in most cases requires the employee to have been sick, which again is also an enabler for sickness presenteeism. However, being sick does not necessarily mean that you choose to attend work. Aronsson and Gustafsson (2005) present sickness absenteeism and sickness presenteeism as two possible outcomes of one single decision process. Their theory unfolds when an employee is sick, when he or she has to make a decision on going to work or being absent. In addition to a higher frequency of sickness, more often the nurse will have to make a decision on going to work when being ill or being absent, which increases the risk of sickness presenteeism. This is also supported by the results of Aronsson and Gustafsson (2005) who found that having a health problem was a strong determinant for sickness presenteeism. Health issues in general have also been emphasized as a prerequisite for sickness presenteeism (Claes, 2011).

Sickness presenteeism appears to be used as kind of a substitute for being absent (Hansen & Andersen, 2008). Caverley et al suggests the theory that if an employee has been absent once, he or she will not wish to be absent again in the near future (Caverley, Cunningham, & MacGregor, 2007). This will increase the possibility of rather going to work if the employee gets sick again shortly after he or she has been absent. Keeping this in mind, it would be logical that employees with a high level of absence would also have a high level of sickness presenteeism. On the other hand, the act of sickness presenteeism could be used as a way of getting well quicker. This could be the case, both for certain kinds of psychological illnesses and even just by meeting people and getting out the door of one's own home. This will of course depend on the illness, but for some, attending work before being completely well could shorten the period of sickness and act as a promoter to the employee's health.

Even though the result indicates a relationship between sickness presenteeism and absence, it does not give any certain explanation as to what causes what. On one hand, one might find that attending work despite being ill would not reduce the total healing period, and result in the employee having to be absent in the future (Aronsson et al., 2000). But on the other hand,

being absent could encourage the employee to attend work before being fully recovered, thus making the absence cause sickness presenteeism. Additionally we do not know what kind of illnesses that cause the sickness presenteeism among nurses and what causes the absence. The underlying reason for sickness presenteeism could be an entirely different reason than the reason for absence, thus the two might not have any correlation at all.

Use of substitutes

Little use of substitutes showed a relation to sickness presenteeism. This means that a nurse rarely being replaced by a substitute when absent from work was more likely to attend work when being ill than a nurse who would always be replaced by a substitute when they were absent. It is difficult to compare this result to the results of other studies, as most of them use a different definition of replacement. Both Aronsson, Gustafsson and Dallner (2000) and Johns (2010) defines replacement by how much work the employee has got to redo when returning to work after a period of absence, and not specifically by the use of substitutes. However, nurses are not that likely to have work piling up while they are away, due to the characteristics of their work. Nevertheless, the consequences of lack of staffing could mean both increased workload and added time-pressure, again contributing to work stress, which according to Johns (2010) is a common reason for sickness presenteeism.

Lack of substitutes or someone to take the workload when the employee is absent has been highlighted as one of the reasons why doctors often choose to attend work despite being ill (McKevitt et al., 1997). It is not unlikely that similar findings could be done within the nursing occupation as well. The two occupations have several things in common - both reside in the health care sector with a close relation to patients, and both have work tasks that need to be done at a certain time and place. However, there are often more nurses than doctors employed at one workplace, and doctors might therefore be more difficult to replace in case of short-term absence. Specialist doctors are even harder to replace, as they might have unique knowledge and experience and therefore be more or less “one of a kind”, a situation rarely true in the same extent for nurses.

When employers choose not to use substitutes when an employee is absent, it could increase the workload for the other nurses at work (McKevitt et al., 1997). The same amount of work will still need to be done, although divided between fewer nurses. The knowledge that their

absence causes an increased workload on their co-workers could be one of the main reasons nurses attend work despite being ill. This explanation did occur among employees in the health care in New Zealand (Dew et al., 2005) and it is not unlikely to find this kind of thinking among employees in other countries as well.

The question used to determine the use of substitutes in this survey does not include any information about the hospital policy concerning use of substitutes. It does, however, give an indication on the prevalence of the use. The hospital might, in theory, have a policy of always using substitutes when an employee is absent - in reality this could be a difficult or even impossible promise to keep. It might not always be possible to find a substitute, especially not on short notice. If the situation implies that the employer does not have anybody who can fill in for the absent nurse, the choice is between managing with one less employee and ordering one of the permanent nurses to fill in. Ordering someone to work is something that most employers want to avoid, both because it decreases the predictability to the employees and because it is something that, at least by Norwegian law, is restricted to times when the health and life of a patient is in danger. Still, the hospital where this survey was conducted is one of the larger hospitals in Norway, employing a large staff of employees. In such hospitals, the need for substitutes is most likely something that occurs quite often and most hospitals of this size will need to have some kind of routines for handling this. The hospital in question has created a staffing pool, or staffing centre, which provides staff to the different clinics when needed, e.g. when a nurse is absent. It has to be considered, however, that having a nurse who is not familiar with the work that has to be done could in some cases be more of a burden than of help.

The health care sector in Norway has been under some financial pressure the last couple of years, and several employers have had to make cutbacks and are trying to save money. Using substitutes when one employee is absent could be seen as an unnecessary cost in the short term, and influence the decision on using substitutes or not. In Norway, all employees are ensured pay from their employer when being absent for less than 16 days in a row. As a substitute will have to get paid as well, the employer ends up paying double. By rather increasing the workload of the nurses at work than using a substitute, the employer could save this additional cost. This practise could also influence an employee's decision on going to work or not, both by knowing about the additional cost to the employer and not wanting to

increase the workload of ones co-workers. However, the need to reduce cost should neither affect the patient care nor employee well-being.

Working-time arrangements

The working-time arrangement factor consists of three different questions in this study; working-time, if the nurses had full-time or part-time employment and if they were permanently or temporarily employed. None of the working-time arrangements were found to be a significant factor to sickness presenteeism.

Few researchers have studied working-time arrangement related to influence on sickness presenteeism, and no studies regarding this subject have been directly related to this occupational group in the health care sector. However, one study in Finland did examine how working-time predicted for sickness presenteeism among Finnish union members. The different categories of working-time arrangement did vary from those used in this study, but the results did indicate that sickness presenteeism was more sensitive to the working-time arrangement than what absence was (Bockerman & Laukkanen, 2010). However, there could be some difficulties concerning the working-time arrangement when a nurse is ill. We could, for example, imagine it to be more difficult to find substitutes during nights and weekends, which would imply a higher level of sickness presenteeism among those who only work such shifts. We could also imagine that some of those who for example only work daytime have work tasks that are not easily done by others, thus increasing the probability of sickness presenteeism among these nurses. However, none of the current working-time arrangements did seem to have an impact on sickness presenteeism in this current study. One thing to keep in mind is the design of the questionnaire regarding the question of working-time, where several of the nurses responded to the “Other” category. If these results actually contained information which should have included them in the already established categories, this might have had an influence on the results. In retrospect, we can say that the possible responses were not aimed directly enough towards the nurses working in that hospital. The unequal distribution of replies in the different categories in this study could have had an impact on why the results did not turn out significant related to sickness presenteeism.

Neither full-time nor part-time employment in relation to sickness presenteeism have been a common topic of interest among the researchers referred to in this article, except for one study

conducted by Bockmann and Laukkanen (2010). Bockmann and Laukkanen investigate permanent full-time work among other working-time arrangements. They explain this precise working-time arrangement as increasing the prevalence of sickness presenteeism because of a higher personal control over ones work and difficulties replacing employees when they are absent. One reason why our results differ from the results of Bockmann and Laukkanens study may be that their study looks at Finnish union members in general – not nurses in particular. Bockmann and Laukkanen state that many of their respondents are in fact blue-collar workers.

In the study by Aronsson et al (2000), temporary employees did attend work despite being ill more often than permanent employees (Aronsson et al., 2000). One explanation could be that the temporary employees had an increased desire to appear dedicated to their employer when only employed for a limited period of time. This could be especially relevant if the nurse wants his or her temporary employment to lead to a permanent employment. However, recent research did not find any difference between the two means of employment (Aronsson & Gustafsson, 2005; Hansen & Andersen, 2008), which is consistent with the results in this survey. This could be related to changes in the work life over the 13 years since the first study was conducted, as we more often than before change workplaces, and both permanent and temporary employment among nurses is more common than it was in earlier years.

Working relationship

Social relationships between co-workers could have an important influence on employee well-being at the workplace. A good relationship between co-workers and working close to other people have been discussed to promote a feeling of obligation, causing the employee attend work (Crout et al., 2005; Grinyer & Singleton, 2000; Hansen & Andersen, 2008; Johns, 2010). However, in the results of this study, there was no significant relationship between working relationship and sickness presenteeism, and the expected hypothesis (H₃: Good working relationship between co-workers is related to a higher level of sickness presenteeism) was not supported.

Tension between co-workers has also been explained as a factor that could make calling in sick difficult for a nurse (Crout et al., 2005). If you are not getting along with those you work together with, it is not unlikely that you try to do your best, being a good co-worker, therefore

not wanting to be absent from work. The study by Hansen and Andersen (2008) highlighted that relationships between co-workers increased the likelihood for sickness presenteeism in their study. Dew et al (2005) confirmed this, and implied that such relationships supplies additional pressure to the employee that could increase sickness presenteeism. However, our result is not consistent with any of the results mentioned above. One of the reasons could be the irregular distribution of responses in some of the categories. The majority of the nurses replied to have good or very good working relationship while only a few responded it to be bad or very bad. The category was submitted in the binary regression analysis despite of this, even though the analysis prefers at least five percent responses within each category (Field, 2009). This could have influenced the results in the analysis for this factor. The difference between the expected result and the actual result could also be an indication that the questions used to investigate working relations did not have the most suited alternatives.

The goodness of fit

In the binary logistic regression analysis, the measure of Nagelkerke R^2 was quite low and did only account for twelve percent. This indicates that the chosen variables does not explain much of the variance for sickness presenteeism among nurses, implying that other factors not included in this analysis, might explain more of the context of sickness presenteeism. In other studies, economical situation, family relationship and perceived job satisfaction are some of the aspects that have been emphasized to explain some of the variation of sickness presenteeism (Aronsson & Gustafsson, 2005; Aronsson et al., 2000; Hansen & Andersen, 2008). None of these factors were included in this study, which could be one of the reasons for the low value of Nagelkerke R^2 . Sickness presenteeism seems to be a complex phenomenon that is influenced by many different aspects, and it could therefore be difficult to find all the factors explaining the whole variance in a small-scale study like this.

4.1 Strengths and limitations

Some strengths and limitations have to be considered regarding to the findings in this study. The study used a cross-sectional design to address sickness presenteeism among nurses, which could be a limitation. A cross-sectional design only describes the reality at the specific time the survey is given, and does not say anything about changes and stability of the replies over a period of time. However, the current design has also been acknowledged as a good design to examine sickness presenteeism because the act of sickness presenteeism requires an

immediate evaluation of the situation, and this is therefore a design that has often been used in relation to sickness presenteeism (Claes, 2011). Researchers have also expressed the need for research using a longitudinal design addressing specific consequences of sickness presenteeism, a design that will provide information about changes and stability over a period of time (Aronsson & Gustafsson, 2005; Claes, 2011).

Another limitation of the study was the use of a single self-report question to measure sickness presenteeism among the nurses. Using this kind of question, you have to depend on the nurses' evaluation of their own health. However, it is only the employees themselves that know if they have attended work when they were ill and whether they should rather have been at home (Claes, 2011). Other researchers have, however, used the current question in other studies, implying it may be a good measure on sickness presenteeism.

Several of the questions used in the survey were obtained from other studies concerning sickness presenteeism. This makes the results easier to compare, a fact that might help indicate the quality of the results. Some of the results in this current study were equal to results found in other surveys, strengthening the results of this study. However, some of the questions that were not obtained from existing studies seemed not to be as specific as desired. For example, one of the questions that determined working-time arrangement got many responses on the "Other" category. The nurses presented many different variants of working-time arrangement that were not options in this survey. A more thorough preparation concerning the different working-time arrangement at this specific hospital could have prevented some of this. In retrospect I also see that it would have been interesting to ask the nurses about their perceived working-time arrangement and not just the actual conditions. This could have revealed if there were any differences within sickness presenteeism among those who were satisfied and not satisfied with their working-time arrangement.

The study only addresses nurses employed at a hospital, which could make it difficult to transfer the results to nurses in other parts of the health care system. We cannot rule out that specific characteristics of working in a hospital could have had an influence on the results; meaning that the results are not valid for nurses employed other places than in a hospital directly. Addressing nurses employed in different parts of the health care system might have made the results easier to transfer to nurses in general.

Further more, one of the greatest strengths of this study is the fact that it supplies knowledge about sickness presenteeism among Norwegian nurses, which, to a large extent has not been examined before. The study also brings a new perspective to sickness presenteeism, on how the use of substitutes when an employee is absent influences sickness presenteeism. The results could therefore be an important supplement to how sickness presenteeism among nurses may be reduced and prevented.

5.0 CONCLUSION

This study contributes to reveal how the work-environmental factors *working-time arrangement, use of substitutes* and *working relationship*, influences sickness presenteeism among nurses at a Norwegian hospital. The study is the first of its kind in Norway dealing specifically with sickness presenteeism among nurses. The results confirm high levels of sickness presenteeism being an issue also among Norwegian nurses. The binary logistic regression analysis reveals a positive relation between sickness presenteeism and absence. This was in line with both previous research and the expectations for this study. Positive relations between sickness presenteeism and little use of substitutes when an employee is absent from work was also one of the main results in the analysis, which was also in line with the expectations. The other two expected hypotheses were not supported, and did not result in any significant relation with sickness presenteeism. This may have been influenced by inadequate response categories in the survey.

Addressing only work-environmental factors presents only a small part of what influences the decision on attending work while being ill. However, the results in this study are an important contribution to how the employer could reduce the act of sickness presenteeism among the employees.

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Appendix

Appendix I	Information letter
Appendix II	Reminder of the survey
Appendix III	The survey
Appendix IV	Approval from St. Olavs Hospital to conduct the survey
Appendix V	Feedback from REK
Appendix VI	Approval from NSD

Forespørsel om deltagelse i spørreundersøkelsen ”Sykenærvær hos sykepleiere”

Dette er en invitasjon til deg som er ansatt som sykepleier ved St. Olavs Hospital til å delta i en spørreundersøkelse om sykenærvær. Sykenærvær er betegnelsen som brukes på å gå på jobb når man er syk. Er du ikke i arbeid per dags dato, eller ikke ansatt ved St. Olavs Hospital lenger, kan du se bort i fra denne invitasjonen.

Forskning viser at sykepleiere er en av de mest utsatte gruppene for sykenærvær, men forskningen knyttet til sykepleiere og sykenærvær er likevel mangelfull. Formålet med prosjektet er å få bedre kunnskap omkring temaet, med fokus på hvordan turnus, bruk av vikarer og samarbeid mellom kollegaer påvirker valget om å dra på jobb ved sykdom.

Prosjektet er en del av min masteroppgave i Helsevitenskap ved Institutt for sosialt arbeid og helsevitenskap, Norges teknisk-naturvitenskaplige universitet. Professor Geir Arild Espenes ved samme institutt, er ansvarlig for prosjektet. Prosjektet gjøres i samarbeid med St. Olavs Hospital, men helseforetaket vil ikke ha tilgang til datamaterialet og det foreligger heller ingen føringer knyttet til prosjektet fra St. Olavs Hospital. Resultatene fra spørreundersøkelsen vil bli presentert i en artikkel som i ettertid vil være tilgjengelig i NTNUs bibliotek på Dragvoll, samt ved St. Olavs Hospital. Alle svar vil bli anonymisert og det er frivillig å delta i spørreundersøkelsen. Prosjektet er godkjent av Personvernombudet for forskning, Norsk samfunnsvitenskaplig datatjeneste AS. Når prosjektet er ferdig 01.12.13 vil datamaterialet anonymiseres.

Jeg håper du er villig til å bruke ti minutter av din tid til å svare på et elektronisk spørreskjema. Spørreundersøkelsen finner du her:

<https://survey.svt.ntnu.no/TakeSurvey.aspx?SurveyID=9IKI7964>

Vennlig hilsen

Siv Linnerud

Mastergradstudent, off. godkjent sykepleier

Geir Arild Espnes

Professor, veileder denne masteroppgaven

Har du svart på spørreskjemaet?

For en uke siden fikk du tilsendt en mail med forespørsel om deltagelse i prosjektet "Sykenærvær hos sykepleiere" og vi ønsker å minne deg på å svare på undersøkelsen. Det er frivillig å delta, men resultatene avhenger av at så mange som mulig deltar. Har du allerede svart på undersøkelsen ber vi deg se bort i fra denne henvendelsen og takker for et verdifullt bidrag til undersøkelsen.

Forespørsel om deltagelse i spørreundersøkelsen "Sykenærvær hos sykepleiere"

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Vennlig hilsen

Siv Linnerud

Mastergradstudent, off. godkjent sykepleier

Geir Arild Espnes

Professor, veileder denne masteroppgaven



Sykenærvær hos sykepleiere

Page 1

Dette er en spørreundersøkelse om sykepleieres sykenærvær, arbeidsforhold, vikarbruk og samarbeid mellom kollegaer.

Spørreundersøkelsen tar i underkant av ti minutter.

Takk for at du er villig til å delta!

Siv Linnerud
mastergradsstudent, off. godkj. sykepleier

Geir Arild Espnes
professor, veileder

1. Kjønn:

- Kvinne
- Mann

2. Alder:

- 20 – 29 år
- 30 – 39 år
- 40 – 49 år
- 50 -59 år
- Over 59 år

3. Hvor mange år har du arbeidet som sykepleier?

NB: Avrund til nærmeste antall hele år. Under ett år = 1.

4. Ved hvilken klinikk er du ansatt?

NB: Det er mulig å krysse av for flere alternativer

- Barne- og ungdomsklinikken
- Divisjon St.Olavs driftsservice, inkl. Ekstravaktsentralen Divisjon psykisk helsevern
- Kirurgisk klinikk
- Klinikk for anestesi og akuttmedisin
- Klinikk for bildediagnostikk
- Klinikk for fysikalsk medisin og rehabilitering
- Klinikk for hjertemedisin
- Klinikk for kliniske servicefunksjoner
- Klinikk for lunge og arbeidsmedisin
- Klinikk for ortopedi, revmatologi og hudsykdommer Klinikk for thoraxkirurgi
- Kreftklinikken
- Kvinneklinikken
- Labriotoriemedisinsk klinikk
- Medisinsk klinikk
- Nevroklinikken
- Øre-nese-hals, kjevekirurgi og øyesykdommer

5. Hvilken type arbeid er du i per dags dato?

- Heltidsarbeid
- Deltidsarbeid
- Annet, spesifiser

6. Er ditt arbeidsforhold av fast eller midlertidig ansettelse?

NB: Det er mulig å krysse av for flere alternativer

- Fast ansettelse
- Midlertidig/tidsavgrenset ansettelse
- Annet, spesifiser

7. Hva slags arbeidstidsordning har du?

- Kun dagarbeid
- Kun nattarbeid
- 2-delt turnus (dag/kveld)
- 3-delt turnus (dag/kveld/natt)
- Kun kveld/helg
- Annet, vennligst forklar nærmere:

8. Har du vært borte fra jobb på grunn av sykdom i løpet av *de siste 12 månedene*?

- Ja, men bare med egenmelding (ikke sykemelding fra lege)
- Ja, men bare med sykemelding fra lege (ikke egenmelding)
- Ja, både med egenmelding og sykemelding fra lege
- Nei, har ikke hatt sykefravær siste 12 måneder

9. Har du i løpet av *de siste 12 månedene* gått på jobb, men følt at du burde vært borte på grunn av din helsetilstand?

- Nei, aldri
 Ja, en gang
 Ja, 2 - 5 ganger
 Ja, mer enn 5 ganger

10. Hvis du har vært på arbeid selv om du følte at du burde vært borte på grunn av din helsetilstand, i hvilken grad stemmer følgende utsagn for deg?

Jeg valgte å dra på jobb fordi...

	<i>Stemmer ikke</i>	<i>Stemmer ganske dårlig</i>	<i>Stemmer delvis</i>	<i>Stemmer ganske godt</i>	<i>Stemmer helt</i>
Det var for sent for min overordnede å kalle inn vikar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jeg vil ikke gi mine kollegaer merarbeid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pasientene/klientene mine forventer at jeg er på jobb	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kollegaene mine forventer at jeg er på jobb	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mitt arbeid er for viktig til at jeg kan være borte	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Når jeg er borte er det ingen som kan ta over oppgavene mine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11.

	<i>Ikke i det hele tatt</i>	<i>I liten grad</i>	<i>I noen grad</i>	<i>I stor grad</i>
I hvor stor grad krever arbeidsoppgavene dine samarbeid med kollegaer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hvor stor grad består arbeidet ditt av direkte pasientkontakt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hvor stor grad kan du selv påvirke din arbeidstid?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hvor stor grad kan dine arbeidsoppgaver gjøres av andre enn deg selv hvis du er borte fra arbeid?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hvor stor grad får du støtte eller hjelp av dine kollegaer hvis du har behov for dette i arbeidet ditt?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12.

	<i>Aldri</i>	<i>Sjelden</i>	<i>Ofte</i>	<i>Alltid</i>
Hvis en av dine kollegaer er borte fra arbeid, innebærer dette mer arbeid for deg?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hvis du er borte fra arbeid, blir det satt inn vikar for deg?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skaper ditt fravære økt arbeidsbelastning for dine kollegaer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hvis du er fraværende fra arbeidsplassen i en uke, hvor ofte må du ta igjen de tapte arbeidsoppgavene når du returnerer på jobb?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Hvor stor andel av din arbeidstid går med til *direkte pasientkontakt* i løpet av en *vanlig arbeidsuke*?

- 0-25 % 25 - 50 % 50 - 75 % 75 – 100 %

14.

	<i>Svært dårlig</i>	<i>Dårlig</i>	<i>Godt</i>	<i>Svært godt</i>
Hvordan vil du betegne det sosiale miljøet på arbeidsplassen din?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hvordan trives du blant dine kollegaer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

"Valla, Cathrine" <Cathrine.Valla@stolav.no>

22. november 2012 14:55

Til: Siv Linnerud

SV: Vedr. masteroppgave og samarbeid

Hei

Vi bekrefter herved at du kan bruke våre ansatte i din datainnsamling til Masteroppgaven.

I og med at vi kun slipper inn studenter med tema som vi mener er relevant for oss, ønsker vi å få oversendt publikasjonen(e).

Med vennlig hilsen

Cathrine Valla

HMS-sjef
St Olav Hospital HF
cathrine.valla@stolav.no
Mob. 93 42 03 84



Region: REK midt	Sakbehandler: Hilde Eikemo	Telefon: 73697508	Vår dato: 21.01.2013	Vår referanse: 2012/2162/REK midt
			Deres dato: 11.12.2012	Deres referanse:

Vår referanse må oppgis ved alle henvendelser

Geir Arild Espnes
NTNU

2012/2162 Sykenærver hos sykepleiere

Vi viser til søknad om forhåndsgodkjenning av ovennevnte forskningsprosjekt. Søknaden ble behandlet av Regional komité for medisinsk og helsefaglig forskningsetikk (REK midt) i møtet 11.01.2013. Vurderingen er gjort med hjemmel i helseforskningsloven § 10, jf. forskningsetikklovens § 4.

Forskningsansvarlig: NTNU
Prosjektleder: Geir Arild Espnes

Prosjektomtale

Sykepleiere er en av de mest utsatte yrkesgruppene for sykenærver. Med sykenærver menes når vi tiltrer på arbeidsplassen til tross for at vår helsestilstand tilsier at vi burde vært hjemme. Studien er utført ved St. Olavs Hospital hvor en spørreundersøkelse er delt ut til alle sykepleiere ansatt ved helseforetaket. Undersøkelsen er utført gjennom et samarbeid med HMS seksjonen, uten at de har hatt direkte tilgang til datamaterialet. Datamaterialet analyseres ved hjelp av multivariate analyser. Målet med studien er å innhente kunnskap om sykepleieres sykenærver i Norge for å undersøke hvordan bruk av vikarer, støtte fra kollegaer og trivsel på arbeidsplassen innvirker på sykepleieres sykenærver.

Vurdering

Komiteen har vurdert søknad, forskningsprotokoll, målsetting og plan for gjennomføring. Studiens formål er å undersøke hvordan bruk av vikarer, støtte fra kollegaer og trivsel på jobben påvirker hvordan en yrkesgruppe vurderer om de skal på jobb eller ikke ved egen sykdom. Prosjektet fremstår som forskning, men ikke som medisinsk eller helsefaglig forskning ettersom formålet ikke er å fremskaffe ny kunnskap om sykdom og helse. Prosjektet omfattes derfor ikke av helseforskningslovens saklige virkeområde, og kan gjennomføres uten nærmere etisk vurdering av REK. Vi minner imidlertid om at dersom det skal registreres personopplysninger, må prosjektet meldes til Norsk Samfunnsvitenskapelige Datatjeneste (NSD).

Vedtak

Regional komité for medisinsk og helsefaglig forskningsetikk, Midt-Norge har funnet at prosjektet faller utenfor komiteens mandat, jf. helseforskningsloven § 2.

Brevkretsadresse:
Dat medisinske fakultet
Medisinsk teknisk
forskningscenter 7489
Trondheim

E-post: rek-midt@medisin.ntnu.no
Web: <http://helseforskning.etikk.com.no/>

All post og e-post som inngår i sakbehandling, bes adressert til REK midt og ikke til enkelte personer

Kindly address all mail and e-mails to the Regional Ethics Committee, REK midt, not to individual staff

Klageadgang

Du kan klage på komiteens vedtak, jf. forvaltningslovens § 28 flg. Klagen sendes til REK midt. Klagefristen er tre uker fra du mottar dette brevet. Dersom vedtaket opprettholdes av REK midt, sendes klagen videre til Den nasjonale forskningsetiske komité for medisin og helsefag for endelig vurdering.

Med vennlig hilsen

Sven Erik Gisvold
Dr.med.
Leder, REK midt

Hilde Eikemo
Sekretariatsleder

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Vår dato: 12.02.2013

Vår ref: 32992 / 3 / SSA

Deres dato:

Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 24.01.2013. Meldingen gjelder prosjektet:

32992	<i>Sykenærver for sykepleiere</i>
Behandlingsansvarlig	NTNU, ved institusjonens øverste leder
Daglig ansvarlig	Geir Arild Espnes
Student	Siv Linnerud

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 melde skjemaet, korrespondanse med ombudet, eventuelle kommentarer samt personopplysningsloven og 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/meldeplikt/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://pvo.nsd.no/prosjekt>.

Personvernombudet vil ved prosjektets avslutning, 01.12.2013, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen


Vigdis Namtvedt Kvalheim


Sondre S. Arnesen

Kontaktperson: Sondre S. Arnesen tlf: 55 58 25 83

✓ Vedlegg: Prosjektvurdering

Kopi: Siv Linnerud, Ove Gjeddesvei 8, 3610 KONGSBERG

Personvernombudet for forskning



Prosjektvurdering - Kommentar

Prosjektnr: 32992

Ifølge prosjektmeldingen skal det innhentes skriftlig samtykke basert på skriftlig informasjon om prosjektet og behandling av personopplysninger. Personvernombudet finner informasjonsskrivet tilfredsstillende utformet, så fremt følgende endringer gjøres:

- legge til dato for prosjektslutt og anonymisering
- fjerne setningen "Prosjektet er godkjent av Regionale komiteer for medisinsk og helsefaglig forskningsetikk"

Ber om at revidert informasjonsskriv sendes til personvernombudet@nsd.uib.no før utvalget kontaktes.

Det vil i prosjektet bli registrert sensitive personopplysninger om helseforhold, jf. personopplysningsloven § 2 nr. 8 c).

Prosjektet skal avsluttes 01.12.13 og innsamlede opplysninger skal da anonymiseres. Anonymisering innebærer at direkte personidentifiserende opplysninger som navn/koblingsnøkkel slettes, og at indirekte personidentifiserende opplysninger (sammenstilling av bakgrunnsopplysninger som f.eks. yrke, alder, kjønn) fjernes eller grovkategoriseres slik at ingen enkeltpersoner kan gjenkjennes i materialet.