Work engagement among nurses

Master's Thesis in Health Science

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SAMMENDRAG

Organisasjoner forventer i dag av sine ansatte at de skal være engasjerte i sin jobb, og at de skal være villige til å gjøre det lille ekstra for at bedriften skal være konkurransedyktige. Arbeidsengasjement er et forholdsvis nytt begrep, og det er først i de senere år at det har vært fokus på denne type forskning. Det er i dag et økende behov for helsearbeidere, og da i særlig grad sykepleiere. I flere land, inkludert Norge, har det i de senere år vært en omlegging av helsetilbudet i et forsøk på å redusere kostnadene. Et av tiltakene har vært å kutte ned på antall sykepleierstillinger, noe som har ført til økt belastning for sykepleiere. Noe av forskningen som har vært gjort de seneste år kan tyde på at å ha et større fokus på å skape arbeidsengasjement kan være et bidrag til at sykepleiere vil forbli i sine jobber.

Denne masteren består av to artikler. Den første er en teoriartikkel, som tar for seg aktuell teori knyttet til arbeidsengasjement generelt og blir drøftet opp mot sykepleiere. Concervation of Resources theory (COR) blir brukt for å forklare sammenhenger mellom ressurser og krav i arbeidet, og hvordan det kan påvirke arbeidsengasjement eller mangel på sådant. I tillegg blir Job Demand-Resouces Model brukt for å vise hvordan jobb ressurser som sosial støtte fra ledere, autonomi og arbeidstyngde kan starte en motivasjonsprosess som kan bidra til økt arbeidsengasjement.

Artikkel to er en empirisk kvantitativ artikkel. Utvalget i denne artikkelen er norske sykepleiere fra ulike helseinstitusjoner i Norge, og spørreundersøkelsen er longitudinell. Arbeidsengasjement blir her sett i forhold til sosial støtte fra ledere, arbeidstyngde og autonomi. Resultat fra analysene viste at arbeidstyngde var det som hadde den største innvirkningen på arbeidsengasjement, men også støtte fra ledere har betydning for å få engasjerte sykepleiere. Det var ingen signifikant sammenhengen mellom autonomi og arbeidsengasejement i analysene som denne artikkelen bygger på.

Den empiriske delen av denne masteren er tenkt skrevet for tidsskriftet *Journal of Advanced Nursing.*

SUMMARY

An organization expects of its employees that they will be engaged in their work, and that they will be willing to put in that little bit extra for the business to be competitive. "Work engagement" is a relatively new term, and only in recent years has it become a focus in this type of research. Today there is a growing need for health care workers, particularly nurses. Several countries, including Norway, have in recent years seen a restructuring of health services in an effort to reduce costs. One such cost-cutting action was to reduce the number of nursing positions, which may have led to an increased workload for nurses. Some of the research that has been done in recent years suggests that a stronger focus on creating work engagement can create a work environment to that will motivate nurses to remain in their jobs.

The master is comprised of two papers. The first is a theoretical paper, which discusses the theory related to work engagement in general, and then relate that theory to how engagement can be initiated in nurses work environment. The Conservation of Resources (COR) theory is used to explain the relationships between work resources and work demands, and how this relationship can affect work engagement or lack thereof. In addition, the Job Demand Resources (JD-R) Model is used to show how job resources such as social support from superiors, autonomy and workload can put into motion a motivational process that may contribute to increased work commitment.

The second paper is a quantitative empirical paper. The sample in this paper is Norwegian nurses from various health institutions in Norway, and the survey is longitudinal. Work engagement is seen in relation to social support from superiors, workload and autonomy. The results from the analyses showed that workload had the greatest impact on work engagement, but that support from supervisors was also important in order to develop engaged nurses. There was no significant relationship between autonomy and work engagement found in this study.

The empirical paper of this thesis has been written according to the guidelines of the *Journal of Advanced Nursing.*

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Abstract

The need for healthcare workers is increasing worldwide, and since nurses represent the greatest proportion of health workers, it is important that nurses stay engaged in their jobs. Another consequence of the shortage in the labor pool of nurses, is patient safety, which is at risk when the workload is too high. Furthermore, a major problem among nurses is a high turnover. The turnover can be explained by a lack of both organizational commitment and work engagement. For this reason, in the future it will be increasingly important to create a job environment that emphasize good working conditions that employees experience as meaningful, an environment that offers engagement with the work, and encourage the employees to stay in their job positions. In this paper the Conservation of Resources (COR) Theory will be used as a theoretical framework to explain how work engagement can be built among nurses. The Job Demand-Resource Model (JD-R) is also used to show how job resources and demands interact, and it can be used to explain both employee engagement at work, and the organizational outcome. The research question in this thesis is*: "Which factors in the work environment can explain work engagement among nurses?"*

Introduction

There is currently a sizeable lack of nurses around the world (Bargagliotti 2012, Erickson et al. 2004, Oulton 2006), and the shortage is expected to increase in the future (Erickson et al. 2004). In the Unites States alone, there are approximately 126, 000 vacant positions for nurses (Oulton 2006). The reasons for this shortage are complex, but the main reasons include reduced supply of educated nurses, and increasing demands placed on healthcare workers, especially nurses (Oulton 2006). New infectious diseases, an aging population, and more complex diseases are some of the causes for the increasing demands. In addition, the workforce among nurses is decreasing, for reasons including early retention of nurses because adverse working environments, e.g. an increasing workload, lack of support from supervisors and coworkers, stress, burnout and low salaries (Oulton 2006). In the last three decades, the average age of nurses has increased dramatically, and in the United States, nurses are the oldest occupational group. Adding to this factor a huge shortage of nurses, and the fact that many nurses choose to work part time or retire early, we can see that there will be significant challenges for the health sector in the future (Lynn and Redman 2005).

During the 1990`s there was a focus on economic costs in the health care system, and plans were made to try to reduce these costs. Nurses, as the largest group of health care workers, were a natural "target" during this process. The use of workers with no license (i.e. not registered nurses) was one measure taken (Zolnierek and Steckel 2010). Nurses play a significant role in patient safety, and when there is a lack of qualified nurses to care for patients, the safety of the patients will be threatened (Zolnierek and Steckel 2010). In addition to the threat to patient treatment and care, errors in health care will have severe economic consequences for the health care budget (Bargagliotti 2012). Studies conducted in Canada and the United States have shown that when there is a decrease of health care personnel, there is an equal increase in mortality rate, and nurses are at risk of developing poorer health and diseases as well (Oulton 2006). In an English report, the need to take care of employees' mental health and to prevent stress in their daily work was highlighted. In England alone it is estimated that 70 million working days are lost each year because of anxiety, depression and stress, and employees expressed that it is the job that makes them sick. Sickness absence, reduced productivity and staff turnover costs English society about £25.9 billion annually.

Mental health programs conducted by large organizations have shown that costs can be reduced by about 30% by improving the working conditions for the employees (The Sainsbury Centre for Mental Health 2007).

A survey called the Registered Nurse Forecast (RN4CAST) was conducted in twelve European countries in 2009, and one of the main findings was that a large amount of nurses said that they would like to leave their work. Of the participants, 3750 were Norwegian nurses, and 942 of them (25,4%) answered that they would like to find another job. Survey results from the Norwegian nurses showed large variations, from 65% who said they were satisfied in their jobs in some hospitals, down to as few as 12% in other hospitals (Sjetne 2011). In the near future there will be a huge demand for health care workers (Erickson et al. 2004, Lynn and Redman 2005, Oulton 2006), therefore it is of great interest to discover the cause of these differences, and to learn what could be done to improve nurses` work environment, thereby contributing to improved work engagement among nurses.

Research question: Which aspects in the work environment can explain work engagement among nurses?

Work engagement

Job traits can have a profound effect on employees' well-being. On the negative side, traits such as high workload and emotional demand, can lead to exhaustion and impaired health, while on the other side, job resources such as social support, feedback on one's performance, and initiate motivation, leads to learning, dedication and work engagement (Bakker and Demerouti 2007).

Alternative expressions to the term work engagement include "involvement, commitment, passion, enthusiasm, absorption, focused effort and energy" (Schaufeli and Bakker 2010). Work engagement can be defined in several ways, such as: "Work engagement is a positive, fulfilling, affective-motivational state of work-related well-being that can be seen as the

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antipode of job burnout" (Bakker and Leiter 2010), or, as Schaufeli and colleagues defines it: "a positive fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al. 2002, p. 74), *Vigor* refers to a high level of energy and mental resilience, and how willing one is to invest effort and persistence while working. *Dedication* to one`s work is defined by involvement in the work, and means that the employee feels that the work is valuable. Finally, *absorption* refers to concentration, engagement and engrossment in the workplace (Schaufeli et al. 2002). Essentially, work engagement includes persistence while working, dedication to work, and engagement in work activities (Schaufeli et al. 2002).

In Bakker and Leiter`s definition of work engagement, it becomes a motivational concept, which means that when one is engaged in one`s work, this engagement fosters a feeling of motivation to do one`s best to reach a challenging goal, and not hold anything back. The concept involves a personal commitment to reaching these goals, and engaged employees put a personal energy and enthusiasm into their work. The focus and energy that is characteristic of work engagement allow employees to bring their full potential into the work (Bakker and Leiter 2010), and work engagement in this definition refers to the relationship between an employee and his or her work (Schaufeli and Bakker 2010).

One of the main factors that can contribute to work engagement is job resources. Resources can play an intrinsic motivational role or an extrinsic motivational role. The intrinsic role will satisfy employees` need for autonomy, skill use and sense of belonging in a group. For example, feedback from one`s supervisor will contribute to enhanced knowledge which may in turn provide increased competence in one`s work. Having the freedom to make one`s own decisions will foster autonomy, and social support will give the employee a sense of belonging to a group (Bakker 2008). The extrinsic motivational role of job resources is instrumental in fostering eagerness to achieve job goals. Supplied with sufficient job resources, the employee is more likely to be eager and dedicated to the work, and his or her chances for succeeding in that work will increase. So by building upon job resources it is more likely that the employee will succeed, and in the process, work goal will be achieved (Bakker 2008).

Employees who are engaged in their work, can work long hours and put their heart into their work, but they do not have the characteristics of workaholics. An important part of being an engaged worker is enjoyment of aspects of life outside work, engaged workers socialize, have hobbies, and are involved in activities that gives meaning to life (Bakker et al. 2007).

Previous studies have revealed that job resources that are positively associated with work engagement include social support from supervisors, feedback for one's performance, autonomy and opportunity for learning (Bakker and Leiter 2010). On the other hand, job demands such as high workload or lack of autonomy and social support from supervisors have a negative association with work engagement. When organizations fail to provide resources, the employee is hindered from experiencing work engagement. Hence, the gap between the potential of the workplace to create an environment that fosters engagement, and the reality may cause employees to feel less vigorous and dedicated in their work (Bakker and Leiter 2010).

Measures of work engagement

Most early workplace studies were about work burnout, which is what prompted more resent research on work engagement. There are several ways to measure work engagement, but there are two main "schools of thought" on the construct. First are Maslach and Leiter, who see work engagement as the opposite of burnout. In fact, according to their view, the work engagement characteristics of energy, involvement and efficacy, are perfectly inversely related to the three dimensions of burnout. They say that burnout can be seen as an "erosion of engagement," where energy becomes exhaustion, engagement turns to cynicism, and effectiveness withers into ineffectiveness. Maslach and Leiter use the Maslach Burnout Inventory (MBI) to measure work engagement/burnout (Bakker 2008). Demerouti and colleagues (Demerouti et al. 2010), however, note that MBI has an important limitation, namely that all the items in each subscale are framed in the same direction, the cynicism and exhaustion items are framed negatively, and the efficacy items are framed positively. The consequence is that if someone has a low score on exhaustion and cynicism, the test cannot be interpreted to say that the test-taker is engaged. These low scores indicate that the test-taker

does not suffer from burnout, but such scores do not necessarily mean that this person is full of energy (Demerouti et al. 2010). For this reason Shaufeli and colleagues, 2002 (Schaufeli et al. 2002) consider these two constructs as independent and unique of one another, and operationalizes burnout and engagement separately.

The second "school of thought" of the concept of work engagement and burnout, also assesses the engagement pole as the "positive antithesis of burnout" like Maslach and Leiter (Bakker 2008), but describes and operationalizes engagement as a separate construct. Researchers in this school use the Utrecht Work Engagement Scale (UWES) to measure work engagement, which comprises three subscales; vigor, dedication and absorption. In some studies, however, it was not possible to find a three-factor structure of work engagement, but rather the empirical findings were that vigor (exhaustion) and dedication (cynicism) are the core dimensions of the concept, in contrast to the third dimension of efficacy (Bakker 2008). The UWES has also been criticized because the items in all three subscales are framed positively. One-sided scales like the UWES are seen by some as inferior to scales that have items with both positively and negatively framed items (Bakker 2008).

In addition to these two "schools" of measurement, there is a third instrument for measuring work engagement, the Oldenburg Burnout Inventory (OLBI), which originally was an instrument developed to measure burnout. The OLBI consists of both positively and negatively framed items, and can therefore be used to measure both work engagement and burnout as a bipolar construct. To measure burnout the positively framed items are recoded, and to measure work engagement the negatively framed items are recoded. The OLBI consist of two dimensions; vigor/exhaustion and dedication/cynicism (Bakker 2008, Demerouti et al. 2010). The OLBI covers physical, cognitive and affective facets of vigor and dedication, including an individual's intrinsic resources, such as emotional strength, cognitive energy, and physical robustness (Demerouti et al. 2010).

Factors in the work environment that can contribute to or hinder engagement among nurses.

A focus on building engagement in workplaces will contribute to streamlining modern organizations, including healthcare institutions. To start with building engagement instead of dealing with burnout may reduce costs for the working institutions. Maslach and Leiter found six factors that could contribute to work engagement or burnout, namely; workload, control, reward, community, fairness and values (Maslach and Leiter 1997). This paper will deal with social support from supervisors (community), workload and autonomy (control) as possible predictors of work engagement among nurses.

Social support from supervisors

Social relationships are an important part of working in an organization. Evaporation of teamwork may result in more conflicts, less respect among team members, and employees working in isolation instead of together. Personal relationships are an integrative part of who we are, and when relationships lacking, confidence in the ability to work together will not exist (Maslach and Leiter 1997). Social support is a work-related factor that a previous study showed to be a possible buffer against job demands, and also an efficient motivator when employees are striving to get the job done (Bakker et al. 2005). Social support from ones supervisor can contribute to a reduction in job strains such as heavy workloads, emotional demands, and physical demands e.g., by giving these demands another perspective (Bakker et al. 2005). Baumeister and Leary says that social support works as a buffer against possible negative effects of stressful environments (Baumeister and Leary 1995). A supervisor that excels in giving employees positive feedback, will also contribute to improving the workplace communication (Bakker et al. 2005). The quality of the relationship between nurses and their supervisors may contribute to work engagement (Bakker et al. 2014), and hence prevent the nurses from leaving their jobs and/or the nursing field (Brunetto et al. 2013). Units where nurses perceive reception of social support from their supervisors, experience more job satisfaction, less stress at work and better health (Hall 2007).

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Workload

Cho and colleagues (Cho et al. 2006) define workload as "the relationship between the work demands that are placed on an employee given a specified amount of time and resources." Maslach and Leiter says that there must be a balance between the organization`s goal which would be productivity, and the employees` need for time enough to get the work done, and for enough vigor to complete the tasks. When the demands for increased productivity exceed the employees` ability to complete the job at hand in time, they may be "pushed beyond what they can sustain" (Maslach and Leiter 1997, p. 39). Nurses often experience a high workload, and sometimes the workload is so extensive that the quality of care given to patients becomes poor (Tummers et al. 2002).

Autonomy

Autonomy can be defined as "the amount of job-related independence, initiative, and freedom, either permitted or required in daily work activities" (Finn 2001, p. 349). Pink describes it as self-direction, and states that autonomy has to include the essential four T`s: "their task, their time, their technique and their team" (Pink 2009, p. 94). In most working organizations no one has complete control, the majority of the work done is in cooperation with other employees or one`s supervisors. But if the employees have no control over their work at all, there will be a limitation in their productivity, and the employees are in danger of burnout (Maslach and Leiter 1997). Maslach and Leiter call the nonexistence of autonomy for a kind of "micromanagement," and say that the employee can interpret the lack of opportunity to make any decisions as absence of trust. They go on to note that with no autonomy employees will have no opportunity to use their "professional judgment" (Maslach and Leiter 1997, p. 44). Autonomy is considered a positive concept in nursing, and can contribute to higher quality of care and higher job satisfaction, and may prevent nurses from leaving their jobs. Furthermore, autonomy among nurses is linked to how the supervisors are managing the ward. Supervisors who enhance their employees autonomy, are more likely to increase their job satisfaction (Mrayyan 2004).

The Conservation of Resources Theory

At the end of the 1980s, the Conservation of Resources (COR) Theory was developed as an alternative to stress and adaption theories. This theory has been used in many settings, such as in research on job burnout, for people facing traumatic events as war and natural catastrophes, and, in recent years in research on work engagement (Salanova et al. 2010), It is a motivational theory (Gorgievski and Hobfoll 2008), the model builds on the premise that an individual's behavior is initiated and maintained by the purchase and accumulation of resources. When people value things in their lives, they seem to be driven to achieve, keep, foster and protect those things (Hobfoll and Shirom 2001). Those valued things are the resources in this theory (Hobfoll 2002, Salanova et al. 2010), and they are defined as "those entities that either are centrally valued in their own right (e.g. self-esteem, close attachments, health, and inner peace), or act as means to obtain centrally valued ends (e.g. money, social support, and credit)" (Hobfoll 2002, p. 307).

The COR theory distinguishes between four types of resources that people need in order to adapt effectively to their environment; *objects*, e.g. to have a home, food to eat, a car; *conditions*, e.g. tenure, a good marriage, job control; *personal characteristics* e.g. professional skills, beliefs, self-esteem; and finally *energies* e.g. knowledge, favors owed, insurance (Hobfoll 1989, Hobfoll 2002, Salanova et al. 2010). These are resources that people need to survive, to meet the demands in their daily lives. Some of these resources, such as money or knowledge, can be used to further gain more resources (Hobfoll 1989). People are active participants in the process of acquiring resources and preventing their loss. For example money can be used to protect oneself from impaired health (Hobfoll et al. 1990).

When resources are threatened or lost, or when people work hard to get the resources they need, and do not obtain the expected amount of benefits, stress will occur. An example for the workplace can be job insecurity or role ambiguity, where the resources are threatened, or job loss, where the resources are lost. In these situations the employee does not get the benefits expected, and the invested resources do not pay out (Gorgievski and Hobfoll 2008).

Most of the resources mentioned above, all exist within the self. However, Hobfoll and Stokes claim that individuals also have access to a huge amount of resources outside the self, namely by "social connectedness and supportive interactions" (Hobfoll and Stokes 1988, p. 499), They define social support as "social interactions or relationships that provide individuals with actual assistance or with a feeling of attachment to a person or group that is perceived as caring or loving" (Hobfoll and Stokes 1988, p. 499). Within this setting personal and social resources are two important facets of one's identity, leading to a motivational drive for each individual, people will make an effort to maintain social support to meet their needs and to protect certain resources, and to protect and maintain their identities (Hobfoll et al. 1990). Relationships can also be seen in a larger social system, such as working organizations, where the COR theory is also relevant in a context where employees are functioning within a huge social structure. Such relationships with coworkers can provide the employee with higher self-esteem and greater work satisfaction (Hobfoll and Lilly 1993).

People invest substantial effort in trying to gain resources such as autonomy, relationships, and feedback on job performance. These resources have a motivational side, and they increase wellbeing and satisfaction at work. It is important to consider the processes that link these resources with engagement, and to understand how resources and engagement develop over time (Salanova et al. 2010). Gain spirals are defined as "amplifying loops in which cyclic relationships among constructs build on each other positively over time" (Salanova et al. 2010). For a gain spiral to exist, two criteria must be met. First, there must be a reciprocal relationship, i.e. a normal and reversed causation, and second, there must be an increase in levels over time (Salanova et al. 2010). According to the COR theory, it is acknowledged that individuals who have a lot of resources are capable of gaining increasingly more resources, this is what is known as a gain spiral. On the opposite side are loss spirals, which illustrate that individuals with fewer resources are more in risk of losing further resources, and in addition will have a lesser ability to constructively utilize other resources (Hobfoll 1989, Hobfoll and Shirom 2001, Salanova et al. 2010). "Loss spirals develop because they lack the resources to offset loss" (Hobfoll 1989, p. 519).

Several empirical studies have been conducted, that confirm Hobfoll`s COR theory, including Llorens and colleagues` study among students, wherein they investigated the relationship

between task resources (time control and method control), efficacy beliefs and work engagement to see whether these were related over time. A gain spiral was confirmed in this study, the task resources had a positive effect on efficacy beliefs, and gave higher levels of work engagement after three weeks (Llorens et al. 2007).

The Job Demand-Resources model

The job demands-resources model (JD-R) model focuses both on negative and positive aspects of employees' health. Moreover, it is suggested that the model can be used to improve employees well-being and performance (Bakker and Demerouti 2007). It is a heuristic model, and includes two working conditions, namely job demands and job resources. The aim of the model is to predict the employees' well-being, work engagement, and organizational outcomes regardless of profession (Bakker et al. 2014, Hakanen and Roodt 2010).

The JD-R model (Figure 1) triggers two different processes, a health impairment process and a motivational process (Bakker et al. 2014). Whereas high job demands (high workload, emotional demands) may cause exhaustion, and lead to energy loss and impaired health among workers, the availability of job resources function as a motivational process and lead to commitment and work engagement (Bakker and Demerouti 2007, Xanthopoulou et al. 2007).

Job resources represent work environments that provide resources for each employee, and "refer to those physical, psychological, social, or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands and the associated physiological and psychological costs; (c) stimulate personal growth, learning and development" (Demerouti et al. 2001, p. 501). The resources in the model represent a buffer against strain, fatigue and burnout, and can also be an important buffer for quite a number of demanding working conditions (Bakker and Demerouti 2007).

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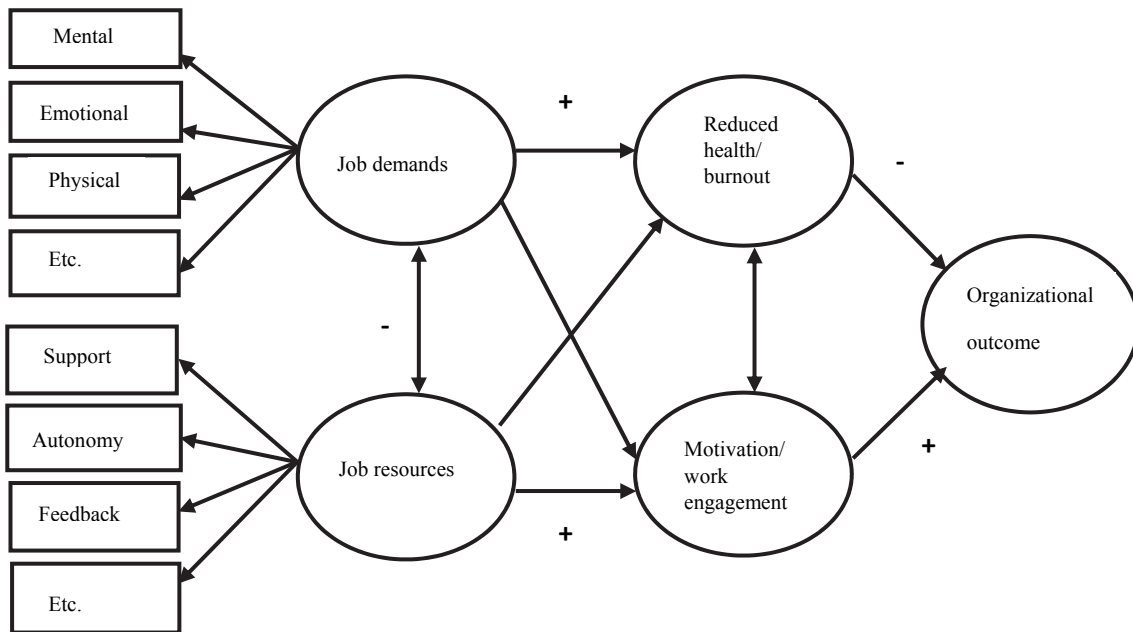
Figure 1. The Job Demands-Resources Model (Bakker 2002).

Job demands refer to "those physical, social, or organizational aspects of the job that require sustained physical or mental effort, and are therefore associated with certain physiological and/or psychological costs (e.g., exhaustion)" (Demerouti et al. 2001, p. 501), and Hakanen and Roodt note that when the demands exceed what the employees are capable of coping with, this may potentially evoke strain (Hakanen and Roodt 2010). Job demands do not have to be negative, but they may become stressors when required demands involve great effort to maintain an expected performance level, thus causing negative reactions, such as chronic fatigue and burnout (Hakanen and Roodt 2010).

Discussion

Work engagement among nurses

The focus of this paper is work engagement among nurses, and its emphasis is work-related factors that can influence nurses` work engagement either positively or negatively. Every working organization has demands that may have negative consequences for its employees.

As seen in the introduction the shortage of nurses is well known, and in addition to that, a large number of nurses are thinking about leaving their jobs. This is a problem that health care institutions need to pay attention to. The COR theory (Hobfoll 1989) presented in this paper, highlights the need for sufficient resources (e.g. social support or autonomy) made available in the working environment, to provide nurses with what they need to manage the demands (e.g. workload). According to the COR theory, employees with enough resources find it easier to gain further resources, moving in an upward spiral. The JD-R model distinguishes between two different categories in a job setting, namely resources and demands, and these two opposite categories play an important role in cultuvating work engagement.

Nevertheless, it can be difficult to measure work engagement among nurses, because there are so many different workplaces, and each workplace has different challenges for the employees to handle. Some units or wards have physically challenging jobs (e.g. heavy lifting etc.), and others more emotionally challenging jobs (e.g. wards treating children with cancer), some units have advanced technical skills that need to be learned, and so on. But still, some common features exist. The workload for nurses has increased because of reduced staff, developments in technical devices over recent years, etc. (Demerouti et al. 2000). The combination of reduced staff together with increased workload, raises challenges for health care institutions as they seek to keep nurses engaged in their work. These challenges will in the future be to provide a work environment that focuses on resources, and optimizes the factors that can contribute to work engagement. Otherwise total costs could become greater than they already are (The Sainsbury Centre for Mental Health 2007), and the outcome for patients could be fatal (Aiken et al. 2014).

Social support from supervisors and work engagement among nurses?

In a working environment, social support refers to "positive social interaction available from management and coworkers in the workplace" (Hall 2007, p. 69). Social support has several dimensions. First, reward and appreciation given for the work that is done, is an important factor of work engagement. This refers not only to financial rewards, as it is also of great

importance to receive social reward from both supervisors and colleagues (Freeney and Tiernan 2009).

According to the COR theory having good relationships makes available a large pool of resources (Hobfoll et al. 1990), and in the JD-R model, social support is an important resource for work engagement (Bakker et al. 2010). According to Bakker and colleagues, job resources can both be a motivational factor and a buffer against job demands. Support from one`s supervisor can ease the impact of job strain, because when the employee receives support and appreciation, demands can appear from another perspective. Through social support the employee can develop better coping mechanisms, which may in turn promote better performance (Bakker and Demerouti 2007).

One can take the establishing of resource groups in nursing as an example. Many units have certain technical devices (e.g. medical equipment like ventilators, infusion pumps, etc.), difficult procedures (e.g. organ donation) or other procedures that are unique to that unit. In order to have the necessary competence, many wards have small groups of nurses who have special training in one or two of these procedures. There are several ways a supervisor can be supportive toward the nurses taking part in these resource groups. First, a supervisor can be supportive by giving the employee enough time to learn the procedure. This must be allocated time during a workday, where the employees have opportunity to withdraw from the regular work to learn the procedure or equipment. Without such training, taking part in such attending such a group can be counterproductive, e.g. the employee will have responsibilities regarding equipment or procedures that she/he is unable to comprehend. Occasionally there are special seminars for the purpose of learning that particular procedure. The supervisor can give support by letting the employee attend such seminars. For the employee, the benefit can be gratitude for the opportunity to acquire new skills and knowledge, and for having a supportive supervisor.

The relationship between employees and supervisor should be built on mutual trust and open communication, with the possibility for constructive feedback both ways. It is the leader`s responsibility to foster such close relationships with his/hers workers. Leaders are also

expected to be experienced nurses, and hence role models for the employees (Salanova et al. 2011). The supervisor can influence the relationships among the nurses in the ward regarding the nature of the communication that take place. The leader can foster communication that reduces conflicts among the nurses, and thereby reduce the possibility of a work environment that is characterized by a non-communicating and dysfunctional staff. In a large group it is expected and normal to have some degree of disagreement, but when the working environment is characterized by openness, where the nurses can express feelings and thoughts, both positive and negative, there is a greater chance of solving problems in a constructive way, of sharing good experiences, and learning from them. By emphasizing good communication, members of the group can also rely on each other to get help when needed. In a good relationship, it feels safe to tell another when one feels insecure or lacks knowledge about something. In that situation, everyone can contribute something to the team, and benefit from others` contribution. Greco and colleagues note that supervisors in nursing wards play a significant role in creating positive working conditions. The way leaders act can have a great impact on the staff and the conditions they work under, and that will ultimately have consequences for the quality of the nurses' care for their patients (Greco et al. 2006).

Several studies has been done regarding supervisors' roles in keeping the nurses engaged, and preventing them from leaving their jobs. A Gallup survey in the United States found that when supervisors were genuinely interested in the employees and had frequent interactions with them, the employees were less likely to quit (Buckingham and Coffman 1999).

A Danish study among midwives asked participants about what made them lose their work engagement, and the answer was frequently a lack of support from supervisors. That could be manifest in a lot of ways, such as not getting help in physically challenging job situations or not receiving help in coping with a traumatic birth experience. When the midwives had such experiences and they did not get the necessary support form supervisors, that could cause a loss of engagement with their work (Engelbrecht 2005).

A British study concluded that the reason for a high turnover (more than 50 %) among nurses was lack of social support, or how the ward was managed. Supervisors can provide social

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support by ensuring that there are enough nurses on each shift, and by finding ways to make the workload manageable (Bradley and Cartwright 2002).

The examples above could easily be related to other areas of nursing. There are many wards where nurses have to deal with physically or emotionally demanding situations, and a lot of strain may be reduced by having supportive supervisors. Social support was also pointed out in the COR theory as a major resource, showing that social support from supervisors may contribute to higher self-esteem and happiness in work, and thereby contribute to increased work engagement (Hobfoll et al. 1990). In sum: social support from supervisors is important for nurses work engagement. Previous studies indicate it is an essential antecedent to engagement in general, and there is reason to believe it would also be important among nurses work engagement, specifically.

Autonomy and work engagement among nurses

For the nurse to experience engagement, an important factor is control over one`s work. Control involves decision-making and the opportunity to use one`s cognitive skills. However, there must be a balance between the nurse`s skill and the complexity of the task he or she is given. If the job is too demanding it may cause distress (Freeney and Tiernan 2009).

Nurses work around the clock, including through the night, on weekends and during holidays, and supervisors are often not present during these times, so one of the nurses at work will have supervisory responsibility, but will not always have the authority to make all required decisions. In this situations, it becomes especially important for the nurse in question to receive recognition for the work done. Otherwise he or she may feel he or she had too much responsibility, and not enough authority. In one study, a nurse expressed her thoughts thus: "… you don`t get any extra pay, for the added responsibility, or any other recognition or thanks" (Finn 2001). When an employee has a lot of autonomy in his or her job, he or she has control over what to do, and how to do it. It is easy to see how this will provide more motivation in the job, and will generate more positive feelings when succeeding with the added responsibilities. In order for this to happen, the leader must give that responsibility to

the nurse in charge of the ward, and then trust him or her to make the decisions that are the best for the staff and the ward in any given situations.

In daily work nurses have to do a lot on their own. It is while working with experienced nurses that the necessary skills to perform certain tasks are learned. Certain situations require specific competences, not only how one do certain things, but also how the tasks are prioritized (Christiansen 2008). One can use the example of the resource group again, when nurses have had the opportunity to acquire additional skills in a particular field, this will give them the opportunity to work more independently. The nurses can also be given autonomy from the supervisors, by letting them choose which resource group to attend. Then there is a greater chance for nurses of becoming part of a group that they are interested in, instead of being forced into a group because there is a lack of nurses with skills in a particular topic. To have responsibility in an area of interest may provide more work engagement. However, it can become a problem if too many nurses wish to attend to the same groups. This issue can be solved by making every group more interesting, for example by taking care in how the groups are presented, and by making the groups equal regarding to how much time is given to work with the project. This point can also be seen through the lens of the COR theory (Hobfoll 1989), which notes that knowledge and skills are important resources in a job context, and that acquiring that knowledge and skill set may give the employee both satisfaction and a feeling of security, through a sense of being more valuable for the ward, as well as through the confidence that comes with mastering a task. Thus, autonomy is an essential part of being a nurse. Since autonomy is found to be strongly related to work engagement, it is reasonable to believe that increasing nurses' knowledge and skills so that they are increasingly able to make decisions on their own, may contribute to increased autonomy, which in turn may contribute to increased work engagement.

Workload and its impact on work engagement among nurses

In nursing, workload is not constant, it can differ from day to day, and from one shift to another. Take a hospital ward for example; sometimes the ward is full of patients, and the nurses have a lot of work to do. In contrast, there can be shifts where there are only a few

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patients on the ward, and there is just a little work to be done, where there are no challenges at all, and the nurses at work may be bored. Another paradox in nursing lies in the tasks they are supposed to do. On the one hand, there are complex procedures that need to be learned, and situations where one may to acquire new knowledge and experience, and on the other hand there are dull and mediocre tasks where the learning situations are marginal.

The strongest predictor of work engagement is sufficient job resources (Bakker 2008). If the job resources exist, then high job demands can also provide engagement. What is important for success when the job demands are high, is the employees` ability to perform their job successfully, which will give increased efficacy. The conditions that have to be met in order to accomplish these goals can include positive feedback following work well done, or meaningful goals for the working team have, as well as the availability of sufficient resources to reach those goals (Bakker and Demerouti 2007, Gorgievski and Hobfoll 2008).

When it comes to nursing, there are several factors that can cause exhaustion, such as hours worked per week, or a lack of necessary skills to perform the necessary tasks in the proper manner. The nurses do not necessarily assess their workload with regard to how much work has to be done, but rather how the work is evaluated, and whether it is appreciated by the working organization (Maslach and Leiter 1997). For example is it difficult to evaluate the nurses' work done in providing social and emotional care to their patient. In other occupations it is easier to measure employees' work, like when it is possible to measure profit or amount of sales (Freeney and Tiernan 2009).

A problem in health care is staff shortage, which can occur because of nurses absent on sick leave, or problems with recruitment. It is a well-known problem that many wards or units have low numbers of nurses on each shift. Due to demands from the government due to reduced economic support and cost savings measures, absent nurses are often not replaced by other nurses. This leads to a greater amount of work to do for the other nurses at work, and sometimes there may not be enough time to get all the work done (Freeney and Tiernan 2009). As seen in the JD-R model (Figure 1) a workload can have two outcomes. Either the workload is so excessive that it inhibits the nurses' capacity to get the work done, and thereby

is a hindrance to work engagement, or it is manageable and involves exciting tasks, and accordingly can contribute to new learning situations for the nurses (Bakker et al. 2007). In one paper based on the RN4CAST survey, the authors found that the patients' outcomes were dependent on how many patients each nurse had responsibility for, and the education level of the nurses. In fact, the study showed that when the nurses` workload increased by just 1 patient, the possibility of an inpatient dying within 30 days after surgery increased by 7 % (Aiken et al. 2014). Seen in this context, when the increased workload becomes too excessive, or the resources available are not sufficient, that affects the outcome for the patients.

A study conducted among Finnish teachers in 2007, aimed to examine if pupils' misbehavior had a negative effect on teachers' work engagement. Misbehavior was expected to be stressful. In this study, researchers found that job resources (e.g. support from supervisor, information, appreciation, and the organizations climate) were a buffer against the negative impact of pupils' misbehavior. According to Bakker and Demerouti, the most important findings in this study, were that job resources are particularly relevant when the working environment is highly stressful (Bakker and Demerouti 2007). The findings of this study seem very applicable to the working conditions for nurses. The working day of a nurse is highly unpredictable. Sometimes the demands from patients or relatives can be excessive and hard to manage for the nurse. To have a supervisor to talk to and get help from with problem-solving can reduce pressure and stress for the nurse. Compared with other occupations, nursing consist almost entirely of working with people, which in itself may be stressful. In addition, pressure can come from the top, from supervisors expecting the job to be done, as well as from the patients, rightfully expecting to receive the best care, regardless of the work pressures the nurse may have. To return to the example with the resource groups, by having developed knowledge and skills during work in a resource group, the workload in the ward can become easier because nurses are already equipped to deal with situations requiring special knowledge. Having such groups can also reduce stress among the other nurses on the ward, since they know that if the necessary competence is demanded, there are nurses with the skills required present at work.

Conclusion

An increasing shortage of nurses around the world raises a great need for knowledge about factors that contribute to work engagement, and thus reduce the chance that more nurses will want to quit their jobs. There is still a lack of knowledge about what creates commitment among nurses. Only a few studies have been conducted among nurses regarding whether work-related factors contribute to work engagement. Since the early retirement of nurses seems to be related to a lack of work engagement, health care institutions may profit from focusing on work-related factors that can improve the work environment for their staff. Research in recent years has focused on the positive factors that can contribute to a working environment that fosters work engagement, and studies have shown organizations have profited from cultivation such an environment.

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Do social support from supervisors, workload and autonomy have a longitudinal relationship with work engagement among Norwegian nurses?

Abstract

Aims: The aim of this study was to examine the relationship between work engagement, workload, social support from supervisors, and job autonomy among Norwegian nurses.

Design: Based on a longitudinal study, data were collected via self-reported survey to test the hypothesis.

Background: Organizations today require engaged employees, and the goal in health care is high-quality in patient care. However, there is a high turnover among nurses in health care and the result is a huge lack of nurses worldwide.

Methods: The data were collected via a survey in Norway among different occupations from 2003 to 2005. In this thesis, only nurses` responses were used (n=1000). Structural equation modeling was used to test the association between the variables.

Results: The most important finding in this study was the long-term negative association between workload and work engagement, which was significant in both regular and reversed models. Social support had positive significant paths to dedication in both the regular and reversed models, but was not significant measured against the vigor component. Autonomy was not significant related to work engagement at either measured time.

Conclusion: The findings suggest that nurses` work engagement is related to features in the work environment. The implications from the findings emphasize the need for health care institutions to consider improving the work environment for nurses, especially with a focus on workload, and to try to reduce the negative impact workload has on nurses` work engagement. The findings also suggest that to create work engagement among nurses, there is a need to focus on social support from supervisors.

Keywords: Nurse, work engagement, social support from supervisors, workload, autonomy, COR theory, JD-R model

Introduction

Today's working organizations, including health care institutions, expect their employees to be engaged in their work, to have initiative, to have a positive attitude, and to be willing "to go the extra mile" in order to fulfill their obligations in a satisfactory manner (Bakker 2008). To ensure that nurses are and remain engaged in their work, it is necessary for health care institutions to facilitate working conditions that foster work engagement (Bakker 2008, Bakker and Schaufeli 2008). Work engagement is a rather new concept (Saks 2006), and can be defined as "a positive, fulfilling, work related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli and Bakker 2004, p. 295). *Vigor* is characterized by an employee with high levels of energy, and with the willingness and ability to put effort into the work, even in demanding situations. *Dedication* involves devotion to the work, the employees are enthusiastic and proud about the work they are doing. *Absorption* is characterized by employees who are fully concentrated and engrossed in their work, so much so that they have problems detaching themselves from their work (Schaufeli and Bakker 2004).

Recent studies have shown evidence that work engagement among employees is important for the organizations outcome. To improve workers` performance, it is important to improve factors that can contribute to a higher level of engagement. The concept of work engagement among health care workers, and especially among nurses, is not clearly understood, and in order to implement interventions to improve nurses' performance, further investigation is necessary (Simpson 2009).

In any occupation there are risks of developing physical and psychological illness from stress, but this is particularly the case among health care workers. Stressful characteristics of health care workers careers include long working hours, a lack of social support, staff shortage and a low degree of autonomy (Setti and Argentero 2011), and nurses are often confronted with death, suffering and grief, while at the same time, the tasks of everyday work can be monotonous and dull (Freeney and Tiernan 2009). Burnout can result if such stressful working conditions last over time. To avoid employee burnout, organizations need to focus on cultivating positive aspects in the working conditions for health care workers (Setti and

Argentero 2011). Focusing on engagement from the start, instead of dealing with burnout, has several benefits. When the focus is on developing engagement, the amount of nurses suffering from burnout will decrease, and that in turn will result fewer nurses on sick leave and reduced health service costs. Previous studies revealed that engagement improves the quality of health care. Moreover, nurse engagement entails advantages for the organization and gives the employees a sense of well-being (Freeney and Tiernan 2009).

Previous studies have shown that job resources like autonomy, social support from supervisors, performance feedback and the possibility to learn and acquire new skills are positively associated with work engagement (Bakker and Demerouti 2007, Schaufeli and Salanova 2007). The present study`s aim is to explore the longitudinal relationship between social support from supervisors, workload and autonomy, and work engagement among Norwegian nurses.

Background

Work engagement among nurses

Nurses can, in many settings, experience stressful working conditions (Demerouti et al. 2000, Fasoli 2010, Setti and Argentero 2011), but when it comes to work engagement among nurses, previous studies have some contradictory findings. Blizzard (Blizzard 2005) found that nurses scored lower in engagement than the rest of the professional staff surveyed, mainly because of low recognition for work done and insufficient resources to do their job. In another survey, he also found that only 18% of nurses actually said they were engaged in their jobs (Blizzard 2002), and Fasoli (Fasoli 2010) also claims that nurses score low on work engagement. Others have found that nurses have a lot of work engagement, but despite that, many nurses are suffering from burnout, while others nurses doing the same job manage to stay engaged in their jobs (Tomic and Tomic 2011). Recent studies have revealed that many nurses are leaving their jobs, and further more are considering leaving the nursing field entirely (Lynn and Redman 2005, Oulton 2006). Fasoli claims that disengagement is the reason for the high turnover among nurses (Fasoli 2010).

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Nurses often report that they enjoy helping and caring for patients and working with the patient`s next-of-kin (Lynn and Redman 2005). Why then, do they choose to leave nursing and take jobs outside the health care system? Studies have revealed that many nurses share the attitude : ”I love my work but hate my job” (Lynn and Redman 2005, p. 265). This finding suggests that factors in the working environment are causing dissatisfaction and low work engagement, and are motivating nurses to find other jobs (Lynn and Redman 2005).

There have been only a few studies on nurses' job engagement, and as a result of this minimal treatment, the concept is poorly understood (Jenaro et al. 2011, Simpson 2009). It will become increasingly important to find the factors that will engage nurses in their work, motivating them to continue to work as nurses.

Conservation of Resources theory

According to the Conservation of Resources (COR) theory people are driven to protect, foster and preserve the things that they have attained and that they value. These acquirements are the resources in the COR theory, and are defined as "those entities that either are centrally valued in their own right, or act as means to obtain centrally valued ends" (Hobfoll 2002, p. 307). Hobfoll (Hobfoll 2002) distinguishes between four different resources in his theory, namely *objects* (e.g. food, a home), *conditions* (e.g. job autonomy, social support), *personal characteristics* (e.g. skills, worth), and *energies* (e.g. money, knowledge). In the COR theory, the already existing resources play a significant role in the gaining of new resources (Hobfoll and Shirom 2001). Using to this principle of gaining and protecting resources, the COR theory can be used to explain work engagement. Engagement will occur when individuals succeed in gaining resources, and that in turn will boost energetic resources (Gorgievski and Hobfoll 2008). According to the COR theory, resources develop in caravans, which means that existing resources can bring additional resources in the future, creating a gain spiral (Hobfoll 2002). Mirroring gain spirals, there is also the assumption of loss spirals, wherein individuals with a small resource pool are susceptible to lose resources more easily (Hobfoll 2002).

The strongest predictor of work engagement is having sufficient job resources (Schaufeli and Bakker 2004). Having a large resource pool available in the working environment, can contribute to further growth and resource gain. This means that if job demands are high, it is still possible to have work engagement, as long as there are enough resources to handle the demands in a proper manner (Bakker et al. 2007). When one assumes there is a linkage between job resources and work engagement, it is implied that these factors will reciprocally strengthen each other. Furthermore, when there are sufficient existing resources, employees are more likely to become more engaged over time. Engaged employees are more likely to have more energy and thereby take advantage of existing job resources, and more motivated to create new resources (Hobfoll 2002). On the other side, if the job resources are inadequate to handle the work demands, the employee may invest resources, but not get the expected outcome for the job done, resulting in a loss spiral which can ultimately lead to impaired health and disengagement (Hobfoll 1989). For individuals, work is an important part of life, it provides resources in terms of learning and experiences, provides an income and can be a place for social interactions. At the same time, work also has certain demands and restraints that can contribute to a loss of resources (Gorgievski and Hobfoll 2008).

Some empirical studies have been conducted on the relationship between job resources and work engagement. Xanthopoulou and colleagues (Xanthopoulou et al. 2009) found in a longitudinal study a reciprocal relationship between job resources, personal resources and work engagement. Similarly, Hakanen and colleagues (Hakanen et al. 2008) found in a longitudinal study among Finnish dentists support for a reciprocal relationship between job resources, providing resource caravans or gain spirals. Both studies support the COR theory's assumption that resources grow into a cycle where the employee can adapt successfully into the working environment, where the job resources foster personal resources and vice versa.

Job Demand-Resources Model

The Job Demand-Resources (JD-R) model intends to explain employees' wellbeing regardless of occupation, and purports that working conditions can be divided into two broad categories, namely job demands and job resources (Demerouti et al. 2001). *Job demands* are related to physical and psychological efforts the employees are exposed to. Excessive demands may contribute to ill health. *Job resources* are the working conditions that enables the employee to cope with the work tasks and demands. Because high job demands can inhibit the buildup of resources, job demands and job resources are mostly negatively correlated (Bakker and Demerouti 2007, Demerouti et al. 2001). Job resources are the part of the work environment that "(a) are functional in achieving work-related goals, (b) reduce job demands and the associated physiological and psychological costs, and (c) stimulate personal growth and development" (Xanthopoulou et al. 2007, p. 122). However, it is not always the case that high job demands are negative. Bakker and Demerouti claim that if high job demands are accompanied with enough job resources, the outcome can be enthusiasm and work engagement for the employees (Bakker and Demerouti 2007).

Like the COR theory the JR-D model hypothesizes that there is a buffer that explains the interaction between job demands and job resources, by proposing that the relationship between job demands and job engagement is somewhat weaker for employees who have a lot of resources at their disposal (Xanthopoulou et al. 2007). In addition the JD-R model assumes that job resources are expected to gain salience, especially when the job demands are high. Put another way, work engagement is supposed to be stronger when there is a positive association with job demands (Bakker and Demerouti 2008, Hakanen and Roodt 2010, Xanthopoulou et al. 2007).

Building upon the COR theory and the JD-R model, the present studys` aim was both to explore the regular and reversed relationship between job resources (social support from supervisors and autonomy) and job demands (workload), and to determine whether those work-related factors are longitudinally related to Norwegian nurses` work engagement. Specifically it was hypothesized that:

Hypothesis 1: (Regular Model, M1)

a. Social support from supervisors at Time 1 (T1) is positively associated with work engagement at Time 2 (T2).

b. Workload at T1 is negatively associated with work engagement at T2.

c. Autonomy at T1 is positively associated with work engagement at T2

Hypotheses 2: (Reversed Model, M2)

a. Work engagement at T1 is positively associated with social support from superiors at T2.

b. Work engagement at T1 is negatively associated with workload at T2.

c. Work engagement at T1 is positively associated with autonomy at T2.

THE STUDY

Aims

The aim of the study was to examine workplace factors such as social support from supervisors, workload and autonomy, and to determine whether these features had an impact on Norwegian nurses` work engagement over time.

Design

Data in the present study is from a longitudinal survey conducted in Norway during 2003-2005, via self-reporting questionnaires to test the hypothesis.

Sample

There were originally eight different professions that participated in the surveys; lawyers, physicians, nurses, priests, bus drivers, teachers, people working in advertisement, and employees in information technology. In this paper, the nurses' response were extracted from the data material for use in analysis. Statistics Norway (SN) carried out the two surveys. A random sample of 1000 nurses, 500 female nurses and 500 male nurses, were asked by letter to participate.

Out of the 1000 nurses to whom the questionnaire (Appendix 1) was sent, in 2003, there were 681 who responded. Of these, there were 342 women (50,2%) and 339 men (49,8%). The average age was 41 years, SD 9,96 (Table 1), ranging from 23 to 69 years old. The response from male and female nurses was about the same, 70% from female nurses, and 69% from male nurses. In 2005, the same questionnaire was sent to all the nurses who responded in 2003. Of the 681 nurses who participated in 2003, there were 496 who responded in 2005. The response rate for female and male nurses was about the same in the second survey as well, 73% of female nurses responded, and 72% of male nurses (Skare, 2006). The nurses in the surveys were registered nurses, midwives and nurses with an other specialization (e.g. nurses in operating rooms, psychiatric wards, etc.) (Skare, 2006).

Data collection

Measures

Work engagement: In this paper work engagement was measured by a Norwegian version of the 16-item Oldenburg Burnout Inventory (OLBI) (Appendix 2), which contains only the vigor and dedication dimensions. Recent studies have failed to find a third dimension of work engagement, and imply that vigor and dedication are the core dimensions of the construct, and that absorption has a somewhat different role, and can be seen as a consequence of work engagement instead of a facet of the construct (Bakker 2008, Mauno et al. 2007, Salanova et

al. 2011).The OLBI includes both negatively and positively framed questions, so that both ends of the continuum are covered.

The Norwegian version of the OLBI has been used several times. It has been translated to Norwegian and back-translated by a bilingual German psychiatrist, then compared with the English and Swedish version of the OLBI (Innstrand et al. 2011, Innstrand et al. 2008).

There are two differences in the Norwegian version of the OLBI contrary to the English version. First, in the second dimension, dedication, the first item, "I am less interested in my job now than in the beginning", was originally a positively framed question in the English version, "I always find new and interesting aspects in my work". According to Innstrand and colleagues, the rephrasing of the item was done without changing the factor structure (Innstrand et al. 2012). The second change in the Norwegian version is that the answers are a five-point scale from *Totally disagree* (1) to *Totally agree* (5). In the English version work engagement is measured by a four-point scale from *Strongly agree* (1) to *Strongly disagree* (4). The negatively framed questions are reversed in this thesis for the purpose of measuring work engagement. Both vigor and dedication consist of eight items each. An example of an item measuring vigor is, *"I can tolerate the pressure of my work very well".* An example of an item measuring dedication is, *"I find my work to be a positive challenge".*

Social support from supervisors: Social support from supervisors is measured by six variables (Appendix 3). The questions cover social support from one`s supervisors, and ask whether the employees have opportunities to talk to the supervisors when there are difficulties in work-related situations. The questions also cover the extent to which the employee is given the opportunity to develop his or her skills. An example question reads, *"To what extent are the following statements correct for your relationship with your superior: I often receive approval and recognition from my supervisors"*, and the answers are scored whit a five-point scale from *Totally disagree* (1) to *Totally agree* (5).

Workload: Three items are used to measure how employees experience their workload. The respondents were asked questions like, *"How often do you think you…; "work under*

unacceptable pressure?" The items are measured with a five-point scale ranging from *Never* (1) to *Often* (5).

Autonomy: Autonomy was measured by four variables. The content in the items regards to what degree the employee has control over his or her daily working situations, e.g., if needed they can take some time off, or they can make decisions about their schedule for the day. A sample items are framed: *"Indicate how often you think you have…; so much influence on your own work, that you can delay issues that were planned, for example when you have too much to do"?* The variables are measured with a five-point scale from *Never* (1) to *Often* (5).

Data analysis

Data analysis for descriptive statistics, correlation analysis, and explorative factor analysis was performed using SPSS © version 21. Structural Equation Modeling (SEM) was conducted using AMOS © version 21.

Computing fit measures in AMOS is never a problem with saturated data. However, when a data set is incomplete, fit measures can require extensive computation. For example, fit measure such as CFI cannot be estimated when there are missing values (Arbukle 2012). In order to deal with that problem, the SEM analyses computed were based on perfect data, so everyone who answered all the items at both T1 and T2 were included in the SEM analysis, and all observations with missing values were excluded. The total number for the SEM analysis was 349 for both T1 and T2. The missing cases were excluded listwise.

To examine the longitudinal relationship between work engagement and social support from supervisors, workload and autonomy, a baseline model was tested with two competing models. The models are as follow:

1. Stability model (M0): A stability model with correlations between all the variables for both T1 and T2, but with no structural paths. The model was used as a reference/baseline for the two following models.

2. Regular model (M1): This model is like M0, but also includes structural paths from social support from supervisors, workload and autonomy T1 toward the work engagement dimensions T2.

3. Reversed model (M2): This model resembles M0, but includes structural paths from the two work engagement dimensions T1 to social support from supervisors, workload and autonomy T2.

Model fit

For all the analyses the Maximum likelihood of estimation was used. When using the Root Mean Square Error of Approximation (RMSEA)(Appendix 4), it is preferred to have a fit below .05, which indicates a good fit, but a fit below .08 is acceptable. The Goodness of Fit Index (GFI) is a fit measure that can classify absolute indices of fit, because it compares the present model with no model at all. It provides a value from 0 to 1, and results should preferably have a value of .90. The Tucker-Lewis Index (TLI) has values from 0 (no fit) to 1 (perfect fit). Values close to .95 reflects a good model fit. The Comparative Fit Index (CFI) has values from 0 (no fit) to 1 (perfect fit). A value close to 1 indicates a very good fit.

Validity and reliability

The OLBI scale is an often used and validated scale (Demerouti et al. 2010). A principal component analysis (PCA) was conducted on the other 13 items (social support from supervisors, workload and autonomy items) with oblim rotation. The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for the analysis, KMO =.88, and the KMO values for individual scores were >.64, which is over the limit of .50. Bartlett`s test of sphericity, χ^2 (78) = 2961,59, p < .001, indicates that the items were sufficiently large for PCA. The three items social support from supervisors, workload and autonomy, all had

Eigenvalues above 1. A reliability test was conducted with Chronbach`s Alpha for all scales, and all were acceptable above .76 (see Table 1).

Results

As shown in Table 1, all the scales correlate significantly. As expected, workload is negatively correlated with the other variables, the remaining variables correlate positively.

Table 1. Means, standard deviation, internal consistencies (*Chronbach`s alpha on the diagonal*), and Pearson`s correlations among the variables.

		M	SD	1	2	3	4	5	6	7	8	9	10
	Age T1	41.08	9.96										
1	V T1	3.35	.74	(.87)									
2	V T2	3.36	.74	.56***	(.86)								
3	D T1	3.70	.79	.55***	.30***	(.87)							
4	D T2	3.74	.76	.34***	.61***	.54***	(.87)						
5	SS T1	3.55	.84	.39***	.29***	.42***	.26***	(.90)					
6	SS T2	3.52	.86	.27***	.38***	.26***	.44***	.49***	(.91)				
7	WL T1	3.12	.80	-.57***	-.36***	-.34***	-.25***	-.35***	-.23***	(80)			
8	WL T2	3.07	.80	-.35***	-.55***	-.18***	-.35***	-.23***	-.30***	.52***	(.80)		
9	A T1	3.09	.80	.41***	.26***	.31***	.25***	.50***	.36***	-.39***	-.29***	(.76)	
10	A T2	3.18	.85	.19***	.27***	.18***	.35***	.29***	.49***	-.18***	-.29***	.56***	(.79)

*** $p < .001$. Note; V = vigor, D = dedication, SS = social support from supervisors, WL = workload, A = autonomy, T1 = time 1, T2 = time 2.

The results from the SEM analyses indicates that the model fit is quite good (Table 2). In the present model, the RMSEA is .05 for both the regular (M1) and the reversed (M2) models, which is a value that indicates a reasonable fit. GFI values in the present study were .87 and .88, for the regular and reversed models, respectively, and should preferably had a higher fit. For the CFI, the values were .93, and above .90 for both M1 and M2. The TLI values were .92 for both M1 and M2. The three models was also compared. There were improvements from the stability model (M0) to both the regular model (Model 0 versus Model 1: $\Delta \chi2$ (1183) =2570,60, p <.001), and the reversed model (Model 0 versus Model 2: $\Delta \chi2$ (1183) = 2551,15, p<.001). Between the regular model and the reversed model there were no significant differences (Model 1 versus Model 2: $\Delta \chi2$ (0) = 20,43, not significant).

Table 2. Fit model for SEM analysis, and chi-square difference test of the models

Model	χ^2	d.f.	p.	RMSEA	GFI	CFI	TLI	Comparison	$\Delta \chi^2$	Δ d.f.
M0	3285.98	1550	.000	.07	.71	.84	.83	--		
M1	714.40	367	.000	.05	.87	.93	.92	M0-M1	2570,60	1183*
M2	734.83	367	.000	.05	.88	.93	.92	M0-M2	2551,15	1183*
								M1-M2	20,43	0

χ^2= chi-square, d.f. = degrees of freedom, p= p-value, RMSEA= root mean square error of approximation, GFI= goodness of fit index, CFI= comparative fit index, TLI = Tucker-Lewis Index. $\Delta \chi^2$ = difference in chi-square comparison, Δ df = difference in degrees of freedom. * significant at the .001 level
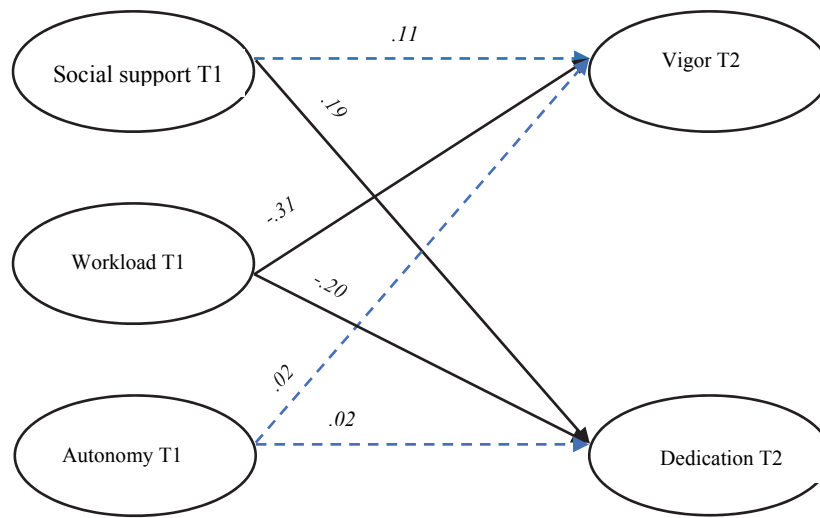

Figure 1. SEM analysis Regular Model (M1). Coefficients represents standardized estimates. The dotted arrows indicates no significant relationship.

In the regular model (M1) (Figure 1), the SEM analysis for Time 1 (T1) to the two work engagement dimensions Time 2 (T2) had insignificant paths from social support from supervisors to vigor, and from autonomy to both vigor and dedication. The path from dedication to social support from supervisors was significant. As seen from Figure 1, the strongest association is between workload and the two work engagement dimensions, which were both significant.
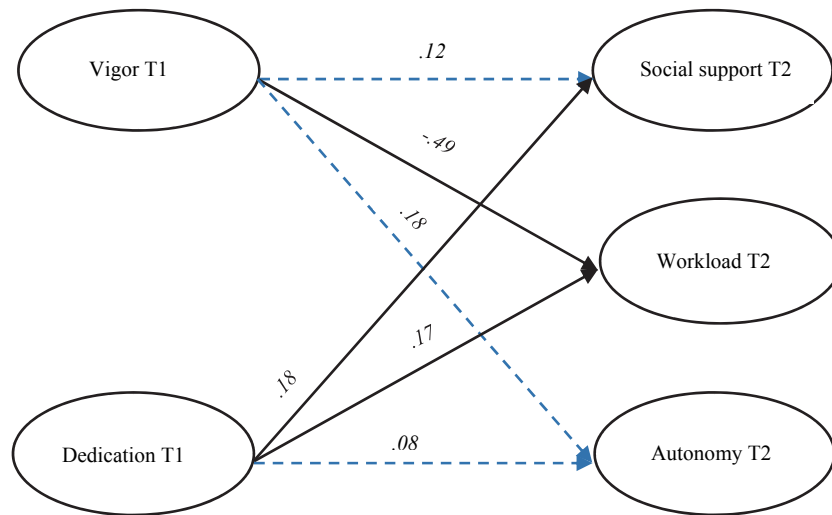
Figure 2. SEM analysis Reversed Model (M2). Coefficients represents standardized estimates. The dotted arrows indicates no significant relationship.

In the reversed model (Figure 2) there were no significant association from the work engagement scales at T1 towards autonomy T2. Opposed to the hypothesis, the dedication T1 path toward workload T2 was positive and significant, and toward vigor was negative and significant. In accordance with the hypothesis the path from dedication T1 to social support from supervisors T2 was positive and significant. No significant relationship between vigor T1 to social support from supervisors T2 was found.

Discussion

The purpose of the present study was to investigate the long-term relationship between social support from supervisors, workload, autonomy and work engagement among Norwegian nurses. Based on the main assumptions of Hobfolls` (Hobfoll 1989, Hobfoll 2002) COR theory, it was hypothesized that social support from supervisors and autonomy would have a positive effect on work engagement, and that workload would have a negative effect on work engagement among nurses. Similarly, it was hypothesized that work engagement would have a positive relation to social support from supervisors and autonomy, and a negative relation to work engagement.

The hypothesis regarding the positive effect of social support from supervisors on work engagement was only partly confirmed. In the regular model, the path from social support from supervisors at Time 1 (T1) to vigor Time 2 (T2) was not significant, but the path was significant to dedication T2. Similarly, in the reversed model, the path from vigor T1 to social support from supervisors T2 was not significant, but the path from dedication T1 to social support from supervisors T2 was significant. This means that social support from supervisors does not make the nurses in the present study feel more vigorous at work, and those who have a lot of energy at work do not perceive that they get more social support from their supervisors. On the other hand, the paths in both models were significant between social support from supervisors and dedication, indicating that the nurses who are really in to their jobs and see the work as a challenge, also perceive social support from their supervisor, and vice versa. In line with the assumption of the COR theory (Hobfoll 1989), dedication to one`s work and social support from one`s supervisors will each effect the other over time, and thereby create gain spirals, social support from supervisors will create dedicated nurses, and dedicated nurses will provide supportive supervisors. Social support from supervisors can also be viewed as a resource an employee will try to protect, and further improve, for the purpose of preventing resource loss in the future.

Positive feedback is essential in order to motivate workers. It is especially important in health care, because job characteristics in nursing can be difficult to measure. For instance, caring for a patient often includes giving the patient sufficient respect or helping him or her to deal with pain and anguish. The care may be of great value to the patient, but cannot be measured by, for example, early discharge from hospital or declaration of health for the patient. In situations where there is lack of feedback from either patients or the patients' next-of-kin, it becomes even more important for nurses to receive recognitions from supervisors for the work done. This is in accordance with studies that have revealed that a lack of recognition from one`s supervisors may cause the employee to feel insuefficient (Hall 2007). When nurses receive needed support and recognition from their supervisors, it can contribute to altering focus from loss to gain of resources (Gorgievski and Hobfoll 2008). Studies have also confirmed that a supervisor`s relationship with the nurses under him or her impacts whether the nurses intend to stay in their jobs (Brunetto et al. 2013, Shacklock et al. 2013).

As hypothesized, the SEM analysis confirmed the negative effect of workload T1 on work engagement T2, with negative relationships towards both the work engagement dimensions. The strongest relationship was between workload and vigor. However, for the reversed model, the path between workload and dedication was positive, in contrast to what was hypothesized. One of the questions in the workload measure was framed: "How often do you think you…: work under an unacceptable pressure". Thus, one explanation for this result, could be that employees may be so dedicated in their work that they take or are given so much responsibility that they force them-selves too hard. Hence, nurses who are too dedicated might run the risk of burnout. In previous studies on burnout the connection has also been stronger from workload to exhaustion than to the cynicism component, but in contrast to the present study, high workload did not give more dedicated nurses (Demerouti et al. 2000, Leiter and Maslach 2009). It is desired to have dedicated nurses in healthcare, but to avoid burnout among the dedicated nurses, it will be important in the future to find strategies to prevent that the work will become a burden.

Another explanation for the positive path between workload and dedication, could be that the dedicated nurses in this study have significant resources. According to previous studies, work engagement can be explained by existing resources, namely that resources motivate by encouraging work engagement, with positive results as the outcome (Schaufeli and Bakker 2004). According to the COR theory (Hobfoll 1989, Hobfoll 2002), existing resources will create a gain spiral, where resources provide easy access to further resources, and the employee will therefore be able to manage the workload. It is also in line with Karaseks` job demand-control model, which emphasizes the importance of employee control over work. When the employee has control, it is possible to predict a positive outcome, wherein the employee will have opportunities for personal growth and learning, and hence may contribute to work engagement in the future (Karasek and Theorell 1990). This findings is in accordance with other studies (Bakker et al. 2010), that have found that high job demands (i.e. work load, emotional strain) are buffered by having sufficient resources at hand. It is also in line with the JD-R model (Demerouti et al. 2001), as long at the high job demands occur in combination with available resources, the demands may be perceived as challenges that can contribute to work engagement (Bakker et al. 2007, Hakanen et al. 2005). This coincides with Setti and Argentino`s (Setti and Argentero 2011) findings, namely that workload is the main predictor of work engagement, and that work engagement increased when the workload was

manageable. On the other hand, nurses are finding it increasingly difficult to deal with "doing more for less", which means that future concerns for health care institutions is how to reduce the nurses' workload (Lynn and Redman 2005). These results confirm for that there is a limit to how much work one can expect from employees during a workday. If the workload is too high and there are a lack of resources, there can be consequences for the patients (Aiken et al. 2014), and the nurses may be in danger of burnout (Demerouti et al. 2000). Nevertheless, more research is needed before any firm conclusion on the positive relationship between workload and work engagement can be made.

For the regular model and the reversed model, the hypothesis was that autonomy T1 would have a positive effect on work engagement T2, and the opposite, that work engagement T1 would have a positive effect on autonomy T2. The path between autonomy and the two work engagement dimensions for both these models was not significant, and therefore does not support the hypotheses. This is contrary to several previous studies (Bargagliotti 2012, Finn 2001, Setti and Argentero 2011, Xanthopoulou et al. 2009) where autonomy seemed to be a huge motivational factor for nurses` work engagement. In the aforementioned studies the autonomy scale may differ from the scale used in the present study. One of the autonomy variables in the current study was whether the respondent had the possibility to take time off at short notice, a positive answer to that question does not necessarily create more dedicated or energetic employees. However, in one study (Mrayyan 2004), the autonomy scale was split in two; one for autonomy in patient-care decisions, and one concerning more unit-operational decisions. The conclusion in Mrayyans` study was that nurses reported more autonomy in patient-care decisions, than in decisions related to daily work in the unit. Questions in the latter category are more similar to the items used in the present study, which may explain why the hypothesis regarding autonomy was not confirmed. The autonomy variables in this study consisted of statements regarding to what degree the employee can make decisions regarding how to plan and carry out working tasks during the day.

As in previous studies, the present study indicates the importance of reducing the nurses' workload. This can be done by ensuring that there are enough nurses at work in relation to the work that has to be done. Workload reduction can also be accomplished by ensuring that the nurses have the necessary skills and knowledge, and consequently not have to use great

amount of time to figure out how to do certain tasks. Having varied and interesting tasks will also help make it easier to deal with a large workload.

When employees feel engaged in their jobs, their work will be enhanced by the satisfaction of being good at their jobs and achieving work goals, by excitement about challenges and by appreciation in relationships with coworkers. These positive emotions foster commitment and motivation, employees wants to keep doing their job as long as it makes them feel good about themselves. In a positive job environment creativity will blossom and minds will remain open for new and innovative solutions. Success in achieving work goals can balance out any mistakes or failure occasionally experienced (Maslach and Leiter 1997). Social support from supervisors is also an important factor for work engagement, and leaders can support nurses in several ways. Regular interactions with the employees is necessary to have the opportunity to consider individual needs. It may be that some nurses need extra training in certain procedures, or that some nurses need further challenges. Feedback on work done is also important. Positive feedback on work well done is needed, as well as feedback on mistakes made. If the criticism is given in a respectful and constructive manner, the outcome could be that all the nurses on the ward can learn from the mistake.

Based on previous research, there is reason to believe that autonomy can contribute to work engagement. Because of the divergent findings in the present study regarding to autonomy compared to previous studies, further research is necessary.

Limitations

A great strength of the present study is it longitudinal design for investigating possible relationships for work engagement among Norwegian nurses. Nevertheless, there are some limitations as well. First, the study is based on a self-reporting questionnaire, which could potentially cause methods bias, the responses from the questions do not automatically reflect the objective reality. Further, when using a self-reporting questionnaire there is also potential for self-selection bias. The data from this study is from 2003-2005. Despite the fact that the data is somewhat "old", there is reason to believe that the relationships among the variables

will be the same, and that the results therefore are equally relevant today, and unaffected by the fact that the survey was conducted a few years ago.

CONCLUSION

The present study endorses the need for a supportive leader in order to cultivate engaged nurses, and suggests that such a positive relationship would create gain spirals. It also supports the need to reduce nurses' workload, as a high workload seems to decrease the level of work engagement over time. Finding strategies to enhance supportive leadership and reduce workload is therefore essential, as engaged nurses are needed in order to have a health care system that provides high quality care to patients in the future.

What is already known about this topic:

- There is a shortage of nurses world wide
- Workplace factors play a significant role in nurses` work engagement
- Previous research has shown that organizational factors can contribute to work engagement among nurses

What this paper adds:

- A study with a longitudinal design, and with advanced statistical analysis
- The conclusion that workload have an impact on nurses` work engagement over time
- The conclusion that social support from supervisors can contribute to more dedicated nurses

Implications for practice:

- In order to reduce turnover in nursing, healthcare institutions must focus on strategies to create positive working environments.

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APPENDIX I:

Letters to the samples in the first survey and the questionnaire

From: http://www.ssb.no/emner/06/90/notat_200448/notat_200448.pdf

Statistisk sentralbyrå
Statistics Norway

Undersøkelse om

belastninger, mestring og helse innenfor utsatte yrker

De fleste spørsmålene i dette skjemaet besvarer du ved å sette ett kryss i ruten ved det svaret du vil gi. **Når du sender inn ferdig utfylt spørreskjema er du med i trekningen av et gavekort på 10 000 kroner,- og ti gavekort på 1 000 kroner.** Gavekortene kan brukes i et utvalg butikker.

Lykke til med utfyllingen!

YRKE OG ARBEIDSTID

Utvalget i denne undersøkelsen er trukket fra Statistisk sentralbyrås yrkesregister, men fordi registeret kan inneholde feil, ønsker vi likevel å spørre deg om yrket ditt.

1. **Hvilket yrke har du:**_____

2. **Hva går arbeidet ditt i hovedsak ut på:**_____

3. **Arbeider du i privat eller offentlig virksomhet?**
1 ☐   Privat
2 ☐   Offentlig

4. Hva er din avtalte arbeidstid i gjennomsnitt per uke?   ____ timer

5. Hva er din faktiske arbeidstid i gjennomsnitt per uke?   ____ timer

6. Dersom du har mindre enn 100% stilling, skyldes det:
1 ☐   Omsorgsoppgaver
2 ☐   For stor arbeidsbyrde ved full stilling
3 ☐   Helsemessige årsaker
4 ☐   Kombinasjon med uføretrygd
5 ☐   Annet

TIDSPRESS OG DIN INNFLYTELSE PÅ DIN ARBEIDSSITUASJON

7. Hender det at du har så mye å gjøre at arbeidssituasjonen din blir oppjaget og masete, og i tilfelle hvor ofte?
1 ☐   Sjelden eller aldri
2 ☐   I perioder, men ikke daglig
3 ☐   Daglig, mindre enn halvparten av arbeidstiden
4 ☐   Daglig, mer enn halvparten av arbeidstiden

8. I hvilken grad kan du selv bestemme ditt arbeidstempo?
1 ☐   I høy grad
2 ☐   I noen grad
3 ☐   I liten grad

9. I hvilken grad kan du vanligvis selv bestemme eller planlegge rekkefølgen i dine arbeidsoppgaver i løpet av dagen?
1 ☐   I høy grad
2 ☐   I noen grad
3 ☐   I liten grad

10. Angi hvor ofte du synes at
(Sett ett kryss på hver linje)

		Aldri	Sjelden	Iblant	Ganske ofte	Ofte	Uaktuelt
		1	2	3	4	5	6
1	du har tilstrekkelig mulighet til å diskutere organiseringen av ditt eget arbeid...............	☐	☐	☐	☐	☐	☐
2	du har tilstrekkelig innflytelse på avgjørelser som gjelder din arbeidsplan...	☐	☐	☐	☐	☐	☐
3	du har så mye innflytelse på arbeidet ditt at du kan utsette saker som var planlagt, f.eks. når du får for mye å gjøre..............	☐	☐	☐	☐	☐	☐
4	du arbeider under et uakseptabelt arbeidspress...................	☐	☐	☐	☐	☐	☐
5	du har så mange arbeidsoppgaver at det hindrer deg i å arbeide effektivt...................	☐	☐	☐	☐	☐	☐
6	du har problemer med å kunne gjøre spesielle oppgaver uten å bli forstyrret....	☐	☐	☐	☐	☐	☐
7	du har mulighet for på kort varsel å ta deg fri eller avspasere en halv eller en hel dag.................	☐	☐	☐	☐	☐	☐

11. I hvilken grad stemmer følgende utsagn for ditt forhold til overordnete
Sett ett kryss på hver linje

		Stemmer ikke	Stemmer ganske dårlig	Stemmer delvis	Stemmer ganske godt	Stemmer helt	Uaktuelt
		1	2	3	4	5	6
1	Jeg har mulighet til å snakke med min nærmeste overordnete om vanskeligheter i arbeidet.....................	☐	☐	☐	☐	☐	☐
2	Jeg får den oppmuntring og støtte jeg trenger av min nærmeste overordnete......................	☐	☐	☐	☐	☐	☐
3	Min nærmeste overordnete pleier å informere meg om forandringer av betydning for arbeidet mitt...............	☐	☐	☐	☐	☐	☐
4	Min nærmeste overordnete har samme syn som meg på hva min kompetanse består i................	☐	☐	☐	☐	☐	☐
5	Min nærmeste overordnete legger til rette for at jeg skal kunne utvikle meg i jobben................	☐	☐	☐	☐	☐	☐

12. Anerkjennelse av arbeidsinnsats. I hvilken grad opplever du at følgende utsagn stemmer for deg?
Sett ett kryss på hver linje

		Stemmer ikke	Stemmer ganske dårlig	Stemmer delvis	Stemmer ganske godt	Stemmer helt	Uaktuelt
		1	2	3	4	5	6
1	Der jeg arbeider har ledelsen store muligheter for å belønne god arbeidsinnsats.....................	☐	☐	☐	☐	☐	☐
2	Jeg får ofte ros og anerkjennelse fra mine overordnete......	☐	☐	☐	☐	☐	☐
3	Jeg får ofte ros og anerkjennelse fra kolleger og arbeidskamerater......................	☐	☐	☐	☐	☐	☐
4	Jeg får ofte ros og anerkjennelse fra andre som jeg har med å gjøre i jobben (kunder, klienter, elever, samarbeidspartnere, etc)...............	☐	☐	☐	☐	☐	☐
5	Jeg synes lønnen min står i rimelig forhold til mitt ansvar og innsats på jobben................	☐	☐	☐	☐	☐	☐

TILKNYTNING TIL ARBEIDET

13. I hvilken grad stemmer beskrivelsene nedenfor med dine egne opplevelser den siste måneden?

Sett ett kryss på hver linje

	Stemmer ikke (1)	Stemmer ganske dårlig (2)	Stemmer delvis (3)	Stemmer ganske godt (4)	Stemmer helt (5)	Uaktuelt (6)
1 Jeg føler at arbeidet tømmer meg følelsesmessig	☐	☐	☐	☐	☐	☐
2 Jeg føler meg full av kraft og energi	☐	☐	☐	☐	☐	☐
3 Jeg føler meg sliten når jeg står opp om morgenen og vet at jeg må på jobb	☐	☐	☐	☐	☐	☐
4 Jeg føler at jeg har positiv innflytelse på andre menneskers liv gjennom det jeg gjør i jobben	☐	☐	☐	☐	☐	☐
5 Jeg føler meg oppbrukt når arbeidsdagen er over	☐	☐	☐	☐	☐	☐
6 Jeg synes ikke jeg strekker meg for langt for å klare kravene i jobben	☐	☐	☐	☐	☐	☐
7 Jeg føler meg frustrert i jobben	☐	☐	☐	☐	☐	☐
8 Jeg får ikke brukt ressursene mine så godt som jeg burde i jobben	☐	☐	☐	☐	☐	☐
9 Jeg har gjort mye som er verdt innsatsen i denne jobben	☐	☐	☐	☐	☐	☐

	Stemmer ikke (1)	Stemmer ganske dårlig (2)	Stemmer delvis (3)	Stemmer ganske godt (4)	Stemmer helt (5)	Uaktuelt (6)
10 Jeg føler meg utbrent i denne jobben	☐	☐	☐	☐	☐	☐
11 Jeg føler meg som regel kvikk og opplagt i jobben	☐	☐	☐	☐	☐	☐
12 Jeg får ikke utrettet stort i denne jobben	☐	☐	☐	☐	☐	☐
13 Det som før var utfordrende i jobben er nå mest en plage	☐	☐	☐	☐	☐	☐
14 Jeg føler at jeg ikke orker stor mer i denne jobben	☐	☐	☐	☐	☐	☐
15 I jobben har jeg en god følelse av å være til nytte	☐	☐	☐	☐	☐	☐
16 Jeg har som regel overskudd til fritidssysler når jeg kommer hjem etter endt arbeidsdag	☐	☐	☐	☐	☐	☐
17 Jeg føler at mye av det jeg gjør i jobben er ganske bortkastet	☐	☐	☐	☐	☐	☐
18 Jeg føler ikke at jeg arbeider for hardt i jobben	☐	☐	☐	☐	☐	☐

	Stemmer ikke (1)	Stemmer ganske dårlig (2)	Stemmer delvis (3)	Stemmer ganske godt (4)	Stemmer helt (5)	Uaktuelt (6)
19 Det er en god balanse mellom de kreftene jeg investerer i arbeidet og de jeg investerer i livet for øvrig	☐	☐	☐	☐	☐	☐
20 Det er virkelig stressende for meg å jobbe hele dagen	☐	☐	☐	☐	☐	☐
21 Jeg løser problemer som oppstår på jobben på en effektiv måte	☐	☐	☐	☐	☐	☐
22 Jeg synes jeg bidrar effektivt til å løse bedriftens oppgaver	☐	☐	☐	☐	☐	☐
23 Jeg er mindre interessert i jobben nå enn da jeg begynte i den	☐	☐	☐	☐	☐	☐
24 Etter hvert er jeg blitt mindre entusiastisk når det gjelder jobben	☐	☐	☐	☐	☐	☐
25 Jeg synes jeg gjør en god jobb	☐	☐	☐	☐	☐	☐
26 Jeg føler meg oppløftet når jeg får til noe på jobben	☐	☐	☐	☐	☐	☐
27 Jeg vil bare gjøre jobben min og ikke noe mer	☐	☐	☐	☐	☐	☐

Spørsmål om **TILKNYTNING TIL ARBEIDET** fortsetter:

I hvilken grad stemmer beskrivelsene nedenfor med dine egne opplevelser den siste måneden?
Sett ett kryss på hver linje

		Stemmer ikke	Stemmer ganske dårlig	Stemmer delvis	Stemmer ganske godt	Stemmer helt	Uaktuelt
		1	2	3	4	5	6
28	Det hender stadig oftere at jeg snakker nedsettende om jobben	☐	☐	☐	☐	☐	☐
29	Jeg trenger mer tid nå enn tidligere for å hente meg inn etter jobben	☐	☐	☐	☐	☐	☐
30	Jeg klarer belastninger i arbeidet mitt bra	☐	☐	☐	☐	☐	☐
3I	I det siste har jeg arbeidet stadig mer mekanisk og tenkt mindre gjennom oppgavene	☐	☐	☐	☐	☐	☐
32	Jeg ser på jobben min som en utfordring	☐	☐	☐	☐	☐	☐
33	Med tiden har jeg mistet den dype interessen for arbeidet mitt	☐	☐	☐	☐	☐	☐
34	Av og til byr arbeidsoppgavene meg rett og slett i mot	☐	☐	☐	☐	☐	☐
35	Jeg kan ikke tenke meg noe annet yrke enn mitt eget	☐	☐	☐	☐	☐	☐
36	Jeg har glede av arbeidet jeg gjør	☐	☐	☐	☐	☐	☐
37	Jobben min engasjerer meg	☐	☐	☐	☐	☐	☐

SOSIAL DELTAKELSE

14. Hvor ofte har du kontakt med slekt eller venner som du ikke bor sammen med?
Sett ett kryss

1 ☐ Sjeldnere enn en gang i året
2 ☐ En eller flere ganger i året, men ikke hver måned
3 ☐ Omtrent hver måned, men ikke hver uke
4 ☐ Omtrent hver uke, men ikke daglig
5 ☐ Flere ganger i uka eller daglig

15. Har du noen personer du kan snakke helt fortrolig med?
1 ☐ Nei
2 ☐ Ja, en
3 ☐ Ja, flere

ULIKE HELSEPLAGER

16. Har du i løpet av den siste måneden vært plaget av:
Sett ett kryss på hver linje

		Ikke plaget	Litt plaget	Ganske mye plaget	Veldig mye plaget
		0	1	2	3
1	Nakkesmerter	☐	☐	☐	☐
2	Smerter øverst i ryggen	☐	☐	☐	☐
3	Smerter i korsrygg	☐	☐	☐	☐
4	Smerter i armene	☐	☐	☐	☐
5	Smerter i skuldre	☐	☐	☐	☐
6	Smerter i føttene	☐	☐	☐	☐
7	Fordøyelsesproblemer	☐	☐	☐	☐
8	Brystsmerter	☐	☐	☐	☐
9	Andre plager	☐	☐	☐	☐

17. Nedenfor finner du en liste med plager og problemer som man av og til kan ha

Angi hvor mye hvert enkelt problem har plaget deg eller vært til besvær i løpet av den siste måneden.

Sett ett kryss på hver linje

		Ikke plaget 1	Litt plaget 2	Ganske mye plaget 3	Veldig mye plaget 4
1	Hodepine	☐	☐	☐	☐
2	Skjelving	☐	☐	☐	☐
3	Matthet eller svimmelhet	☐	☐	☐	☐
4	Nervøsitet, indre uro	☐	☐	☐	☐
5	Plutselig frykt uten grunn	☐	☐	☐	☐
6	Stadig redd eller engstelig	☐	☐	☐	☐
7	Hjertebank, hjerteslag som løper av gårde	☐	☐	☐	☐
8	Følelse av å være anspent, oppjaget	☐	☐	☐	☐
9	Anfall av angst eller panikk	☐	☐	☐	☐
10	Så rastløs at det er vanskelig å sitte stille	☐	☐	☐	☐
11	Mangel på energi, alt går langsommere enn vanlig	☐	☐	☐	☐
12	Lett for å klandre deg selv	☐	☐	☐	☐
13	Lett for å gråte	☐	☐	☐	☐
14	Tanker om å ta ditt liv	☐	☐	☐	☐
15	Dårlig matlyst	☐	☐	☐	☐
16	Søvnproblemer	☐	☐	☐	☐
17	Følelse av håpløshet med tanke på fremtiden	☐	☐	☐	☐
18	Nedtrykt, tungsindig	☐	☐	☐	☐
19	Følelse av ensomhet	☐	☐	☐	☐
20	Tap av seksuell lyst og interesse	☐	☐	☐	☐
21	Følelse av å være lurt i en felle eller fanget	☐	☐	☐	☐
22	Mye bekymret eller urolig	☐	☐	☐	☐
23	Uten interesse for noe	☐	☐	☐	☐
24	Følelse av at alt er et slit	☐	☐	☐	☐
25	Følelse av å være unyttig	☐	☐	☐	☐

18. Hvor mange dager har du vært borte fra jobb de siste 6 måneder grunnet egen sykdom?

Antall dager:_____

Dersom du ikke har hatt sykefravær de siste 6 måneder, gå direkte videre til spørsmål 20

19. Hvis du har hatt sykefravær de siste 6 månedene, i hvilken grad skyldes det

Sett ett kryss på a) og ett på b)

a) fysisk arbeidspress?
1 ☐ I høy grad
2 ☐ I noen grad
3 ☐ I liten grad
4 ☐ Ikke i det hele tatt

b) psykisk arbeidspress?
1 ☐ I høy grad
2 ☐ I noen grad
3 ☐ I liten grad
4 ☐ Ikke i det hele tatt

20. Føler du at du får nok søvn?

1 ☐ Ja
2 ☐ Nei

21. Hvor mange timer antar du at du i gjennomsnitt har sovet per natt den siste måneden?

Antall timer:_____ per natt

PERSONLIGE KJENNETEGN OG INNSTILLINGER

22. Nedenfor følger noen utsagn om personlige kjennetegn og innstillinger
Marker for hvert av utsagnene om du synes disse stemmer eller ikke stemmer for deg.

		Stemmer ikke 0	Stemmer 1
1	Jeg er svært var for hva andre mennesker tenker og mener om meg	☐	☐
2	Tiltro til meg selv mangler jeg heldigvis ikke	☐	☐
3	Ofte synes det som om andre gjør allting mye bedre enn jeg selv	☐	☐
4	Jeg er svært nærtagende for kritikk	☐	☐
5	Jeg mister lett motet når tingene går galt	☐	☐
6	Skjer det brått uventede ting, kan jeg bli fullstendig forvirret	☐	☐
7	Min sinnsstemning forandrer seg lett alt etter hva som skjer rundt meg	☐	☐
8	Min mangel på selvtillit kan av og til være en plage for meg	☐	☐
9	Folk kan skjelle meg ut ganske kraftig før det går særlig inn på meg	☐	☐
10	Jeg kunne sannsynligvis oppnå mer enn jeg gjør, men jeg ser ikke poenget med å presse meg hardere enn nødvendig for å henge med	☐	☐
11	Jeg er vanligvis så målbevisst at jeg fortsetter å arbeide lenge etter at andre har gitt opp	☐	☐
12	Jeg arbeider hardere enn de fleste	☐	☐
13	Vanligvis driver jeg meg hardere enn de fleste fordi jeg vil gjøre det så bra som mulig	☐	☐
14	Jeg driver ofte meg selv til jeg stuper eller prøver å gjøre mer enn jeg virkelig makter	☐	☐

23. Hvordan stemmer disse påstandene for deg?
Sett ett kryss på hver linje

		Stemmer ikke 1	Stemmer ganske dårlig 2	Stemmer delvis 3	Stemmer ganske godt 4	Stemmer helt 5
1	Det er svært viktig for meg å yte mitt aller beste i jobben	☐	☐	☐	☐	☐
2	Jeg jobber først og fremst for å tjene penger	☐	☐	☐	☐	☐
3	Hvis jeg mislykkes i jobben, er jeg en mislykket person	☐	☐	☐	☐	☐
4	Hvis jeg ikke gjør det virkelig bra i jobben, vil jeg miste andres respekt	☐	☐	☐	☐	☐
5	Forpliktelsene i jobben må gå foran andre forpliktelser og behov	☐	☐	☐	☐	☐
6	Jeg er nødt til å lykkes i arbeidet for å føle meg verdifull	☐	☐	☐	☐	☐
7	Med mine ressurser vil jeg lett kunne påvirke verdier og strategier i en arbeidsorganisasjon	☐	☐	☐	☐	☐
8	Jeg har vanligvis hatt store ambisjoner i arbeidet mitt	☐	☐	☐	☐	☐
9	Jeg setter meg vanligvis høye og langsiktige mål, i arbeidet og ellers	☐	☐	☐	☐	☐
10	Jeg har alltid hatt tro på egne krefter	☐	☐	☐	☐	☐
11	Hva jeg selv gjør til enhver tid, betyr ikke så mye for hva som skjer	☐	☐	☐	☐	☐

Spørsmål 23. fortsetter:
Hvordan stemmer disse påstandene for deg?
Sett ett kryss på hver linje

		Stemmer ikke 1	Stemmer ganske dårlig 2	Stemmer delvis 3	Stemmer ganske godt 4	Stemmer helt 5
12	Det er godt samsvar mellom mine egne yrkesverdier og verdiene i arbeidsorganisasjonen	☐	☐	☐	☐	☐
13	Jeg identifiserer meg sterkt med organisasjonens mål og rammer for arbeidet	☐	☐	☐	☐	☐
14	Jeg føler ofte at jeg må gå på akkord med mine verdier for å mestre kravene i arbeidet	☐	☐	☐	☐	☐
15	Samsvaret mellom organisasjonens og mine egne mål gir en god følelse av fellesskap	☐	☐	☐	☐	☐
16	Organiseringen av arbeidet tillater meg ikke å bruke mine kunnskaper og ressurser på en effektiv måte	☐	☐	☐	☐	☐

24. **Hvilke av følgende situasjoner/faktorer på jobb har du opplevd som belastende det siste året?**
Med belastende mener vi opplevelse av stress og negative følelser, for eksempel i form av usikkerhet, irritasjon og anspenthet
Sett ett kryss på hver linje

		Ikke belastende 1	Litt belastende 2	En del belastende 3	Ganske belastende 4	Svært belastende 5
1	Ansvaret jeg har i jobben	☐	☐	☐	☐	☐
2	Konflikter med kolleger/medarbeidere	☐	☐	☐	☐	☐
3	Urettferdig fordeling av stillinger, oppgaver, lønn eller fordeler	☐	☐	☐	☐	☐
4	Andres urealistiske forventninger til meg i min rolle	☐	☐	☐	☐	☐
5	Krav om effektivisering	☐	☐	☐	☐	☐
6	Krav om å holde meg faglig à jour	☐	☐	☐	☐	☐
7	Stadige forandringer i jobbens rammevilkår (reformer, lovendringer, etc)	☐	☐	☐	☐	☐
8	Konflikt mellom yrkesetiske verdier og krav om produksjon og effektivitet	☐	☐	☐	☐	☐
9	Kontakt med mennesker (pasienter, elever, klienter, kunder)	☐	☐	☐	☐	☐
10	Uregelmessig arbeidstid	☐	☐	☐	☐	☐
11	Å få til balanse mellom arbeid og privatliv	☐	☐	☐	☐	☐
12	Å stadig måtte ta med seg arbeidsoppgaver hjem	☐	☐	☐	☐	☐
13	Jobben går ut over sosialt liv	☐	☐	☐	☐	☐
14	Mangel på støtte hjemmefra, særlig fra ektefelle/samboer	☐	☐	☐	☐	☐
15	Bekymring for egen økonomi	☐	☐	☐	☐	☐

MESTRINGSSTRATEGIER

25. Nedenfor står en rekke utsagn som beskriver hvordan man kan mestre situasjoner når det røyner på og man virkelig opplever stress eller påkjenning. Hvor godt passer hvert av disse utsagnene for ditt vedkommende?

Sett ett kryss på hver linje

		Passer ikke (1)	Passer mindre godt (2)	Både og (3)	Passer ganske godt (4)	Passer svært godt (5)
1	Jeg prøver å inngå en slags avtale eller en overenskomst for å få noe positivt ut av situasjonen	☐	☐	☐	☐	☐
2	Jeg klandrer meg selv	☐	☐	☐	☐	☐
3	Jeg håper det vil skje et under	☐	☐	☐	☐	☐
4	Jeg prøver å se det positive i det hele; aldri så galt at det ikke er godt for noe	☐	☐	☐	☐	☐
5	Jeg skulle ønske jeg var sterkere, mer optimistisk og hadde mer krefter	☐	☐	☐	☐	☐
6	Jeg forsøker å ikke brenne alle broer, men lar flere muligheter stå åpne	☐	☐	☐	☐	☐
7	Jeg forsøker å holde følelsene mine for meg selv	☐	☐	☐	☐	☐
8	Jeg forandrer meg eller vokser som menneske på en god måte	☐	☐	☐	☐	☐
9	Jeg ønsker jeg kunne forandre måten min å føle på	☐	☐	☐	☐	☐
10	Jeg legger en handlingsplan og følger den	☐	☐	☐	☐	☐
11	Jeg får hjelp av fagfolk	☐	☐	☐	☐	☐

		Passer ikke (1)	Passer mindre godt (2)	Både og (3)	Passer ganske godt (4)	Passer svært godt (5)
12	Jeg kritiserer eller sier til meg selv hva jeg burde ha gjort	☐	☐	☐	☐	☐
13	Jeg godtar det som er det nest beste i forhold til det jeg egentlig hadde ønsket	☐	☐	☐	☐	☐
14	Jeg dagdrømmer eller tenker meg inn i en bedre tid eller et bedre sted enn den/der du er nå	☐	☐	☐	☐	☐
15	Jeg tenker at jeg kommer sterkere og bedre rustet ut av hendelsen enn jeg gikk inn i den	☐	☐	☐	☐	☐
16	Jeg sover mer enn vanlig	☐	☐	☐	☐	☐
17	Jeg har fantasier eller ønsker om hvordan det skal gå til slutt	☐	☐	☐	☐	☐
18	Jeg forsøker å la være å handle overilt eller følge min første innskytelse	☐	☐	☐	☐	☐
19	Jeg snakker med noen som kan gjøre noe med problemet	☐	☐	☐	☐	☐
20	Jeg gjør en forandring slik at det vil gå bra til slutt	☐	☐	☐	☐	☐
21	Jeg spør en slektning eller en venn jeg respekterer om råd	☐	☐	☐	☐	☐
22	Jeg forsøker å få det bedre ved å spise, drikke, røyke, ta medisiner e.l.	☐	☐	☐	☐	☐
23	Jeg innser at jeg selv har skapt problemer	☐	☐	☐	☐	☐

Spørsmål 25 fortsetter:
Hvor godt passer hvert av disse utsagnene for ditt vedkommende?
Sett ett kryss på hver linje

		Passer ikke	Passer mindre godt	Både og	Passer ganske godt	Passer svært godt
		1	2	3	4	5
24	Jeg unngår å være sammen med andre mennesker	☐	☐	☐	☐	☐
25	Jeg godtar følelsene mine, men forsøker å unngå at de virker for mye inne på andre ting	☐	☐	☐	☐	☐
26	Jeg ønsker at situasjonen skulle bli borte eller på et eller annet vis gå over av seg selv	☐	☐	☐	☐	☐
27	Jeg lar ikke andre få vite hvor ille det er	☐	☐	☐	☐	☐
28	Jeg forandrer noe ved meg selv så jeg takler situasjonen bedre	☐	☐	☐	☐	☐
29	Jeg snakker med noen om hvordan jeg har det	☐	☐	☐	☐	☐
30	Jeg nekter å tro at det har hendt	☐	☐	☐	☐	☐

ARBEID OG FRITID

26. I hvilken grad opplever du at følgene utsagn stemmer for deg?
Sett ett kryss på hver linje

		Stemmer ikke	Stemmer ganske dårlig	Stemmer delvis	Stemmer ganske godt	Stemmer helt
		1	2	3	4	5
1	Min jobb gjør at jeg bidrar mindre hjemme	☐	☐	☐	☐	☐
2	Stress på jobben gjør meg irritabel hjemme	☐	☐	☐	☐	☐
3	Jobben gjør meg for trøtt til å gjøre ting som trenger min oppmerksomhet hjemme	☐	☐	☐	☐	☐
4	Bekymringer eller problemer på jobben distraherer meg hjemme	☐	☐	☐	☐	☐
5	Mine oppgaver på jobb gjør det lettere å takle personlige og praktiske problemer hjemme	☐	☐	☐	☐	☐
6	Mine oppgaver på jobb gjør meg til en mer interessant person hjemme	☐	☐	☐	☐	☐
7	Å ha en god dag på jobb gjør meg til en bedre partner når jeg kommer hjem	☐	☐	☐	☐	☐
8	Ferdigheter jeg utvikler på jobb kommer til nytte hjemme	☐	☐	☐	☐	☐
9	Forpliktelser hjemme reduserer min kapasitet på jobb	☐	☐	☐	☐	☐
10	Personlige og familiære problemer/bekymringer distraherer meg på jobb	☐	☐	☐	☐	☐
11	Forpliktelser hjemme hindrer meg i å få tilstrekkelig med søvn som jeg behøver for å kunne gjøre en god jobb	☐	☐	☐	☐	☐
12	Stress hjemme gjør meg irritabel på jobb	☐	☐	☐	☐	☐
13	Det å snakke med noen hjemme hjelper meg å takle problemer på jobb	☐	☐	☐	☐	☐
14	Ferdigheter jeg utvikler hjemme, er nyttige på jobb	☐	☐	☐	☐	☐
15	Kjærlighet og respekt som jeg får hjemme, gjør meg sikker på meg selv når jeg er på jobb	☐	☐	☐	☐	☐
16	Livet hjemme hjelper meg å slappe av og lade opp for neste dags jobb	☐	☐	☐	☐	☐

UTFORDRINGER I KONTAKT MED ANDRE MENNESKER

27. Her er en liste med problemer folk angir å ha i omgang med andre mennesker. Vennligst les listen under og marker i hvilken grad disse situasjonene oppleves som vanskelige for deg

Sett ett kryss på hver linje

	Ikke vanskelig 0	Litt vanskelig 1	Både og 2	Ganske vanskelig 3	Veldig vanskelig 4
I. Det er vanskelig for meg å					
1 stole på andre mennesker	☐	☐	☐	☐	☐
2 delta i gruppe	☐	☐	☐	☐	☐
3 holde ting hemmelig for andre mennesker	☐	☐	☐	☐	☐
4 be en person om å slutte å plage meg	☐	☐	☐	☐	☐
5 presentere meg for nye mennesker	☐	☐	☐	☐	☐
6 være uenig med andre mennesker	☐	☐	☐	☐	☐
7 fortelle personlige ting til andre mennesker	☐	☐	☐	☐	☐
8 være bestemt når jeg trenger å være det	☐	☐	☐	☐	☐
9 sette grenser overfor andre mennesker	☐	☐	☐	☐	☐
10 føle nærhet til andre	☐	☐	☐	☐	☐
11 virkelig bry meg om problemer andre mennesker har	☐	☐	☐	☐	☐
12 slappe av og kose meg når jeg går ut med andre	☐	☐	☐	☐	☐
13 tillate meg å kjenne meg sint på noen jeg liker	☐	☐	☐	☐	☐
14 ta imot råd og ordrer fra folk som har myndighet over meg	☐	☐	☐	☐	☐
15 glede meg over et annet menneskes lykke	☐	☐	☐	☐	☐
16 la andre få vite når jeg er sint	☐	☐	☐	☐	☐
17 gi konstruktiv kritikk til andre	☐	☐	☐	☐	☐
18 åpne meg og snakke om følelsene mine til andre	☐	☐	☐	☐	☐
19 ta hensyn til mitt eget beste når en annen blir krevende	☐	☐	☐	☐	☐
20 være trygg på meg selv når jeg er sammen med andre	☐	☐	☐	☐	☐

	Stemmer ikke 1	Stemmer ganske dårlig 2	Stemmer delvis 3	Stemmer ganske godt 4	Stemmer helt 5
II Følgende er ting du gjør mye:					
21 jeg krangler for mye med andre mennesker	☐	☐	☐	☐	☐
22 jeg føler meg for ofte ansvarlig for å løse andres problemer	☐	☐	☐	☐	☐
23 jeg er for åpen overfor andre mennesker	☐	☐	☐	☐	☐
24 jeg er for aggressiv mot andre mennesker	☐	☐	☐	☐	☐
25 jeg prøver for sterkt å tekkes andre mennesker	☐	☐	☐	☐	☐
26 jeg lar for ofte andres behov gå foran mine egne	☐	☐	☐	☐	☐
27 jeg mister beherskelsen for lett	☐	☐	☐	☐	☐
28 jeg beskylder meg selv for ofte for å være skyld i andres problemer	☐	☐	☐	☐	☐
29 jeg holder folk for mye på avstand	☐	☐	☐	☐	☐
30 jeg lar andre mennesker i for høy grad utnytte meg	☐	☐	☐	☐	☐
31 jeg føler meg for ofte flau overfor andre mennesker	☐	☐	☐	☐	☐
32 jeg bekymrer meg for mye for hvordan andre skal reagere på meg	☐	☐	☐	☐	☐

LIVSHENDELSER

28a. Nedenfor følger en liste over hendelser en kan oppleve i løpet av livet.
Hvis du har erfart noe av dette, sett kryss i ruten
1 ☐ Partners død
2 ☐ Barns død
3 ☐ Andre nære personers død
4 ☐ Alvorlig sykdom hos et nærstående familiemedlem
5 ☐ Store økonomiske problemer
6 ☐ En opprivende separasjon/skilsmisse
7 ☐ Alvorlig fysisk sykdom (egen)
8 ☐ Vært utsatt for en alvorlig ulykke (trafikkulykke, brann, osv.)
9 ☐ Langvarige samlivsproblemer/familieproblemer

28b. Har du eventuelt hatt noen du kunne dele dine tanker med, søke råd hos og få støtte og oppmuntring hos i disse situasjonene?
    1 ☐ Ja
    2 ☐ Nei

29. Omtrent hvor ofte drikker du alkohol?
0 ☐ Hver dag eller nesten hver dag
1 ☐ 2-4 ganger i uken
2 ☐ Omtrent en gang i uken
3 ☐ 2-3 ganger i måneden
4 ☐ Omtrent en gang i måneden
5 ☐ Sjeldnere enn en gang i måneden
6 ☐ Aldri i løpet av siste år

30. Hvilke røykevaner har du?
1 ☐ Røyker daglig
2 ☐ Røyker av og til
3 ☐ Har røykt, men sluttet for mer enn 6 måneder siden
4 ☐ Røyker ikke

31. Driver du vanligvis med noen form for mosjon eller trening?
1 ☐ Drev regelmessig med mosjon/trening før, men sluttet for mindre enn 2 år siden
2 ☐ Nei, driver ingen form for mosjon eller trening
3 ☐ Ja, 1-2 ganger i uken
4 ☐ Ja, 3-4 ganger i uken
5 ☐ Ja, 5-7 ganger i uken

32. Hva er din sivilstand?
1 ☐ Gift/registrert partner
2 ☐ Samboende
3 ☐ Separert
4 ☐ Skilt
5 ☐ Enke/enkemann
6 ☐ Ugift

33. Har du barn?
1 ☐ Ja   Hvor mange? _____   Hvor gammelt er ditt yngste barn?_____år
                                           Hvor gammelt er ditt eldste barn?_____år
2 ☐ Nei

Takk for at du tok deg tid til å delta i denne spørreundersøkelsen!

IO-brev

Oslo, oktober 2003
Saksbehandlere: Sven Skaare og Elise Wedde
Seksjon for intervjuundersøkelser

9   Undersøkelse om belastninger, mestring og helse innenfor utsatte yrker

Statistisk sentralbyrå gjennomfører i høst en undersøkelse om belastninger, mestring og helse i åtte utvalgte yrkesgrupper, der i blant [*navn på gruppe*]. Formålet med undersøkelsen er å belyse hvordan personer i antatt utsatte yrkesgrupper opplever forholdet mellom utfordringer og belastninger i arbeidet og sin egen fysiske, og særlig psykiske helse. Hensikten er blant annet å få bedre forståelse for den såkalte utbrenningsprosessen, som de senere årene har vært mye omtalt i media. Undersøkelsen gjennomføres på oppdrag fra Den norske lægeforening. Vi tar sikte på å følge opp med et nytt intervju om to år.

Du er en av 1 000 [*navn på gruppe*]som er trukket ut fra Statistisk sentralbyrås sysselsettingsregister. Til sammen er 8 000 personer trukket ut. **Alle som deltar i årets undersøkelse blir med i trekkingen av ett gavekort til en verdi av 10 000 kroner og ti gavekort til en verdi av 1000 kroner.** Det er frivillig å delta, men for at vi skal få så gode resultater som mulig, er det viktig at alle som er trukket ut blir med. **Vi kan ikke erstatte deg med en annen**. Du kan når som helst trekke deg fra undersøkelsen og kreve opplysningene slettet.

Alle som arbeider i Statistisk sentralbyrå har taushetsplikt. Undersøkelsen gjennomføres etter lovpålagte regler og Statistisk sentralbyrå er underlagt kontroll både fra Datatilsynet og vårt eget personvernombud. Det vil aldri bli kjent utenfor Statistisk sentralbyrå hva enkeltpersoner har svart på undersøkelsen. For å få bedre utbytte av informasjonen vi samler inn, vil vi hente inn opplysninger fra Statistisk sentralbyrås inntekts- og utdanningsregister. Innen utgangen av 2006 vil vi anonymisere datamaterialet slik at identifisering av den enkelte ikke er mulig. Den norske lægeforening vil kun få tilgang til anonymiserte data.

Vi ber deg vennligst svare på spørsmålene i spørreskjemaet og returnere det til Statistisk sentralbyrå i den vedlagt frankerte svarkonvolutten så snart som mulig. Har du spørsmål om undersøkelsen kan du gjerne ringe oss **gratis på telefonnummer 800 83 028**, eller sende en e-post til sven.skaare@ssb.no eller elise.wedde@ssb.no. Spørsmål vedrørende personvern kan rettes til Statistisk sentralbyrås personvernombud, tel 21 09 00 00 eller e-post personvernombud@ssb.no.

På forhånd takk!
Vennlig hilsen

Svein Longva
administrerende direktør

Ole Sandvik
seksjonssjef

10 Undersøking om belastningar, meistring og helse innanfor utsette yrke

Statistisk sentralbyrå gjennomfører i haust ei undersøking om belastningar, meistring og helse i åtte utvalde yrkesgrupper, mellom anna [*navn på gruppe*]. Formålet med undersøkinga er å sjå nærare på korleis personar i sannsynleg utsette yrkesgrupper opplever forholdet mellom utfordringar og belastningar i arbeidet og si eiga fysiske, og særleg psykiske helse. Formålet er mellom anna å få betre forståing for den såkalla utbrenningsprosessen, som dei seinare åra har vore mykje omtala i media. Undersøkinga blir gjennomført på oppdrag frå Den norske lægeforening. Vi tek sikte på å følgje opp med eit nytt intervju om to år.

Du er ein av 1 000 [*navn på gruppe*] som er trekt ut frå sysselsetjingsregisteret i Statistisk sentralbyrå. Til saman er 8 000 personar trekte ut. **Alle som er med i undersøkinga i år blir med i trekninga av eitt gåvekort til ein verdi av 10 000 kroner og ti gåvekort til ein verdi av 1 000 kroner.** Det er frivillig å vere med, men for at vi skal få så gode resultat som råd er, er det viktig at alle som er trekte ut blir med. **Vi kan ikkje erstatte deg med ein annan**. Du kan når som helst trekkje deg frå undersøkinga og krevje opplysningane sletta.

Alle som arbeider i Statistisk sentralbyrå har teieplikt. Undersøkinga blir gjennomført etter lovpålagde reglar og Statistisk sentralbyrå er underordna kontroll både frå Datatilsynet og vårt eige personvernombod. Det vil aldri bli kjent utanfor Statistisk sentralbyrå kva enkeltpersonar har svart på undersøkinga. For å få betre utbytte av informasjonen vi samlar inn, vil vi hente inn opplysningar frå inntekts- og utdanningsregisteret i Statistisk sentralbyrå.Innan utgangen av 2006 vil vi anonymmisere datamaterialet slik at identifisering av den enkelte ikkje er mogeleg. Vi vil aldri offentleggjere eller formidle vidare opplysningar om kva den enkelte har svart. Den norske lægeforening vil berre få tilgang til anonymmiserte data.

Vi ber deg vere vennleg å svare på spørsmåla i spørjeskjemaet og returnere det til Statistisk sentralbyrå i den frankerte svarkonvolutten som ligg ved så snart som mogleg. Har du spørsmål om undersøkinga kan du gjerne ringe oss **gratis på telefonnummer 800 83 028**, eller sende ein e-post til sven.skaare@ssb.no eller elise.wedde@ssb.no. Spørsmål som gjeld personvern kan rettast til personvernombodet i Statistisk sentralbyrå, tlf. 21 09 00 00 eller e-post: personvernombud@ssb.no.

På førehand takk!
Vennleg helsing

Svein Longva
administrerande direktør

Ole Sandvik
seksjonssjef

Takkebrev

Oslo, november 2003
Saksbehandler: Elise Wedde
Seksjon for intervjuundersøkelser

11 Takk for hjelpen!

Vi ønsker å takke alle som har sendt inn svar på skjemaet til undersøkelsen om belastninger, mestring og helse innenfor utsatte yrker. Til nå har vi fått inn mange svar.

Dersom du ennå ikke har rukket å fulle ut skjemaet, vil vi sette stor pris på om du tok deg tid til det i nærmeste fremtid. Det er selvfølgelig frivillig å delta, men det er svært viktig at så mange som mulig deltar. Da blir resultatene bedre og mer pålitelige.

Alle som fyller ut og returnerer skjemaet er med i trekkingen av en premie til en verdi av 10 000,- kroner og ti premier til en verdi av 1 000,- kroner.

Som vi har nevnt tidligere har alle som arbeider i Statistisk sentralbyrå taushetsplikt, og undersøkelsen er i tråd med retningslinjer gitt av Datatilsynet. Ingen opplysninger om hva enkelpersoner har svart på undersøkelsen vil noensinne bli offentliggjort.

Skulle du ha spørsmål om undersøkelsen, eller dersom du trenger et nytt spørreskjema (bokmål eller nynorsk), kan du ringe oss gratis på telefon 800 83 028, eller sende en e-post til wed@ssb.no eller svs@ssb.no.

Med vennlig hilsen,

Ole Sandvik
seksjonssjef

Purrebrev

Oslo, november 2003   B
Saksbehandler: Elise Wedde
Seksjon for intervjuundersøkelser

12 Har du sendt inn spørreskjemaet?

For en tid tilbake fikk du tilsendt et spørreskjema i forbindelse med en undersøkelse om belastning, mestring og helse innenfor utsatte yrker. Da vi ikke kan se å ha mottatt noe skjema fra deg, tillater vi oss å minne om undersøkelsen. Det er frivillig å delta, men resultatet av undersøkelsen avhenger av at så mange som mulig av de som ble trukket ut deltar.

Har du allerede sendt inn skjemaet, ber vi deg se bort fra denne henvendelsen og takker for et verdifullt bidrag til undersøkelsen.

Dersom du ennå ikke har svart, vil vi være veldig takknemlige om du kunne fylle ut skjemaet og returnere det til oss i den frankerte svarkonvolutten så snart som mulig.

Alle som besvarer og returnerer spørreskjemaet er med i trekkingen av et gavekort på kr 10 000,- og ti gavekort til en verdi av kr 1 000,-.

Undersøkelsen gjennomføres etter lovpålagte regler, og SSB er underlagt kontroll både fra Datatilsynet og vårt eget personvernombud. Det vil aldri bli kjent utenfor Statistisk sentralbyrå hva enkeltpersoner har svart på undersøkelsen.

Har du spørsmål om selve undersøkelsen kan du gjerne ringe oss gratis på telefonnummer **800 83 028**, eller sende en e-post til wed@ssb.no eller svs@ssb.no. Vi viser også til informasjon i tidligere brev. Ta kontakt dersom du ønsker spørreskjema på nynorsk.

Generelle spørsmål vedrørende personvern i SSB kan rettes til SSBs personvernombud, telefonnummer 21 09 00 00 eller e-post personvernombud@ssb.no.

Vi ser fram til å motta ditt skjema!

Med vennlig hilsen

Ole Sandvik
seksjonssjef

Sakshandsamar: Elise Wedde
Seksjon for intervjuundersøkelser

13 Har du sendt inn spørjeskjemaet?

For ei tid sidan fekk du tilsendt eit spørjeskjema i samband med ei undersøking om belastning, meistring og helse innanfor utsette yrker. Då vi ikkje kan sjå at vi har motteke skjema frå deg, tillet vi oss å minne om undersøkinga. Det er frivillig å delta, men resultatet av undersøkinga avhenger av at så mange som mogleg av dei som vart trekt ut deltek.

Har du allereie sendt inn skjemaet, ber vi deg om å sjå vekk frå dette brevet og takker for eit verdifullt bidrag til undersøkinga.

Dersom du ennå ikkje har svart, vil vi vere svært takksame om du kunne fylle ut skjemaet og returnere det til oss i den frankerte svarkonvolutten snarast.

Alle som svarer på og returnerer spørjeskjemaet er med i trekkinga av eit gåvekort på kr 10 000,- og ti gåvekort til ein verdi av kr 1 000,-.

Undersøkinga vert gjennomført etter lovpålagde reglar, og SSB er underlagt kontroll både frå Datatilsynet og vårt eige personvernombod. Det vil aldri verte kjent utanfor Statistisk sentralbyrå kva enkeltpersonar har svart på undersøkinga. Vi viser også til informasjon i tidlegare brev. Ta kontakt dersom du ønskjer spørjeskjema på nynorsk.

Har du spørsmål om sjølve undersøkinga kan du ringje oss gratis på telefonnummer **800 83 028**, eller sende ein e-post til wed@ssb.no eller svs@ssb.no. Vi viser også til informasjon i tidlegare brev. Ta kontakt dersom du ønskjer spørjeskjema på nynorsk.

Generelle spørsmål om personvern i SSB kan rettast til SSB sitt personvernombod, telefonnummer 21 09 00 00 eller e-post personvernombud@ssb.no.

Vi ser fram til å motta skjemaet ditt!

Med venleg helsing

Ole Sandvik
seksjonssjef

APPENDIX 2. THE OLDENBURG BURNOUT INVENTORY

	Instructions: Below you find a series of statements with which you may agree or disagree. Using the scale, please indicate the degree of your agreement by selecting the number that corresponds with each statement.				
		Strongly agree	Agree	Disagree	Strongly disagree
1	I always find new and interesting aspects in my work	1	2	3	4
2	There are days when I feel tired before I arrive at work	1	2	3	4
3	It happens more and more often that I talk about my work in a negative way	1	2	3	4
4	After work, I tend to need more time than in the past in order to relax and feel better	1	2	3	4
5	I can tolerate the pressure of my work very well	1	2	3	4
6	Lately, I tend to think less at work and do my job almost mechanically	1	2	3	4
7	I find my work to be a positive challenge	1	2	3	4
8	During my work, I often feel emotionally drained	1	2	3	4
9	Over time, one can become disconnected from this type of work	1	2	3	4
10	After working, I have enough energy for my leisure activities	1	2	3	4
11	Sometimes, I feel sickened by my work tasks	1	2	3	4
12	After my work, I usually feel worn out and weary	1	2	3	4
13	This is the only type of work that I can imagine myself doing	1	2	3	4
14	Usually, I can manage the amount of my work well	1	2	3	4
15	I feel more and more engaged in my work	1	2	3	4
16	When I work, I usually feel energized	1	2	3	4
	Note: Dedication items are: 1(R), 3, 6, 7(R), 9, 11, 13(R), 15(R). Vigor items are: 2, 4, 5(R), 8, 10(R) 12, 14 (R), 16(R). (R) means reversed item when the scores should be such that higher scores indicate more work engagement				

(Demerouti et al. 2010).

Item 1 is changed in the Norwegian version to "I am less interested in my job now than in the beginning," and therefore reversed in order to measure dedication.

From the Norwegian questionnaire (appendix 1) OLBI consisting of the following items:

VIGOR

Question 13:1 (R), 13:3 (R), 13:5(R), 13:29 (R), 13:11, 13:16, 13:18, 13:30

DEDICATION

13:23 (R), 13:28 (R), 13:31 (R), 13:33 (R), 13:34 (R), 13:32, 13:35, 13:37

Note: R = reversed

APPENDIX 3. SOCIAL SUPPORT FROM SUPERVISORS, WORKLOAD AND AUTONOMY SCALES

Social support from supervisor scale

11. To what extent are the following statements correct for your relationship with your superior

1. I have opportunities to talk with my nearest superior about difficulties in my work
2. I receive the encouragement and support I need from my nearest superior
3. My nearest superior gives me the information I need about changes that have importance for my work
4. My nearest superior and I agree about my competence
5. My nearest superior facilitates workplace development opportunities for me

12. Recognition for effort in work. To which extent do you think that the following statements are true for you?

2. I often receive approval and recognition from my superiors

Workload scale

Question 10. How often do you think you…;

4. work under an unacceptable pressure?
5. have so many work tasks that you are prevented you from working effectively?
3. have problems doing particular tasks without being interrupted?

Autonomy scale

Question 10. Indicate how often you think you have…

1. sufficient possibilities to discuss the organization of your own work.
2. sufficient influence on decisions that concern your work schedule
3. so much influence on your own work, that you can delay issues that were planned, for example when you have too much work to do
4. the possibility to take the day off or compensatory time off, a half or a whole day, on short notice

APPENDIX 4. FIT MEASURES

Chi square test

If one get a significant χ^2 relative to degrees of freedom, it indicates that the observed and estimated variance-covariance matrices differ. A significant χ^2 indicates the probability for the difference to be due to sampling variation. For models with about 75-200 cases, the chi square test is a reasonable fit measure, but for models with more cases, the chi square is almost always statistically significant. Thus the chi square are sensitive to sample size (Schumacker and Lomax 2004). An old fit measure is the chi square to d.f. ratio (χ^2 / d.f.), but there is no standardized measure of what is a good or what is a bad fit. It is suggested that a value from 2-5 is a reasonable fit (Arbukle 2012). The MRSEA and TLI are for the most part based on this ratio (Arbukle 2012).

Root mean square error of approximation (RMSEA)

RMSEA tells us how well the tested model, with unknown but optimally chosen parameter estimates, would fit the population covariance matrix. It is an often used parameter because of its sensitivity to the estimated parameters in the model, i.e. the RMSEA favors parsimony in that it will choose the model with the fewer number of parameters. RMSEA has the ability to calculate a confidence interval around its value, and that allows for the 0-hypothesis (poor fit) to be tested more precisely. A well-fitting model will be close to 0, and the cut-off limit should be equal to or less than .08 (Arbukle 2012, Schumacker and Lomax 2004).

Comparative Fit Index (CFI)

CFI compare the present model with alternative models, as the independent model, a model where the variables are assumed to be uncorrelated. The fit will then refer to the difference between the observed and predicted covariance matrix. CFI represents the ratio between the discrepancy of the model tested and the discrepancy of the independent model. Values close to 1 indicate an acceptable fit. CFI is not very sensitive to sample size (Arbukle 2012, Byrne 2010).

Tucker-Lewis Index (TLI)

TLI equals the difference between the chi square of the 0-model and the chi square of the target model, divided by the chi square of the 0-model. So a fit measure of .90 indicates that the model tested improve the fit by 90 % seen in relation to the independent model (Schumacker and Lomax 2004). TLI is relatively independent of sample size, and are normally lower than the GFI, but values close to .90 are acceptable (Arbukle 2012).

Goodness of Fit Index (GFI)

GFI calculate the proportion of variance that is accounted for by the estimated population covariance. It ranges from 0-1, and increases with larger sample. It is accepted that a value of .90 or greater indicate a well-fitting model (Arbukle 2012).

References

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