The association between job satisfaction and work participation in a study population struggling with work participation due to common mental health problems: A cross-sectional study

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ABSTRACT

Background: Common mental health problems such as symptoms of depression and anxiety account for a large proportion of sickness absence and disability. Job satisfaction is related to mental health and sickness absence, however little is known about the relation between job satisfaction and work participation in common mental health problems. More knowledge on this relationship could be of importance for development of interventions aimed at increasing work participation.

Aim: To investigate if job satisfaction is associated with work participation among people self-reporting common mental health problems as the primary cause of their problems with work functioning, and to describe levels of job satisfaction.

Method: The study has a cross-sectional design. Questionnaire and registry based data formed the basis for performing descriptive analyses and logistic regression (n=1193).

Results: One of five job satisfaction items were significantly associated with receiving benefits, after adjusting for gender, occupational grade and subjective health complaints, and showed that low job satisfaction was associated with no work participation (receiving benefits). The mean job satisfaction levels were low. Crosstabulation showed a significant relationship between levels of job satisfaction in relation to employment status.

Conclusion: Low job satisfaction is associated with sickness absence and disability among people with mental health problems. Although findings of this study were inconclusive, we suggest that increasing job satisfaction might be helpful to workers with mental health problems. Further research applying a longitudinal design is warranted to explore the impact of job satisfaction on work participation for people with common mental health problems.

Key words: Cognitive Activation Theory of Stress, Demand/Control model, Job satisfaction, mental health problems, work participation, sickness absence, disability

SAMMENDRAG

Bakgrunn: Vanlige psykiske plager som angst og depresjon er ansvarlig for en stor andel av sykefravær og uførhet. Jobbtilfredshet er assosiert med både mental helse og sykefravær, men man vet lite om forholdet mellom jobbtilfredshet og arbeidslivsdeltagelse hos mennesker med vanlige psykiske plager. Mer kunnskap om faktorer relatert til arbeidslivsdeltagelse hos folk med vanlige psykiske plager vil kunne være nyttig ved utvikling av intervensjoner rettet mot å øke arbeidslivsdeltagelse.

Mål: Å undersøke om jobbtilfredshet er assosiert med arbeidslivsdeltagelse i et utvalg som selvrapporterer at vanlige psykiske plager er hovedårsak til at de har problemer med å fungere i arbeidslivet. Videre vil vi også beskrive nivå av jobbtilfredshet i dette utvalget.

Metode: Tverrsnittstudie. Spørreskjema og registerdata dannet grunnlaget for videre deskriptive analyser og logistisk regresjon (n=1193).

Resultat: En av fem jobbtilfredshet variabler var signifikant assosiert med å motta ytelser. Denne assosiasjonen forble signifikant etter justering for kjønn, subjektive helseplager og yrkeskategori, og viste at lav jobbtilfredshet er assosiert med manglende arbeidslivsdeltagelse. Gjennomsnittlig nivå av jobbtilfredshet var lavt. Krysstabell viste signifikant sammenheng med jobbstatus og nivå av jobbtilfredshet.

Konklusjon: Lav jobbtilfredshet er assosiert med sykefravær og uførhet hos mennesker som strever med arbeidslivsdeltagelse på grunn av vanlige psykiske plager. Selv om funnene i denne studien var noe tvetydige, foreslår vi at å øke jobbtilfredshet kan være en nyttig tilnærming til denne gruppen, som strever med å holde seg i arbeid. For å kunne undersøke sammenhengen mellom jobbtilfredshet og arbeidslivsdeltagelse nærmere, er forskning med longitudinelt design berettiget.

Nøkkelord: Kognitiv Aktiveringsteori om Stress, Krav/Kontroll modellen, jobbtilfredshet, psykiske plager, arbeidslivsdeltagelse, sykefravær, uførhet

1.INTRODUCTION

1.1 Background

In the *Ottawa Charter for Health Promotion* the World Health Organization (WHO) states that "health is created and lived by people within the settings of their everyday life; where they learn, work, play and love" (WHO, 1986, p. 2). WHO defines health as more than just the absence of disease, and claims that it is a state of "complete physical, mental, and social well-being" (WHO, 1946). This broad definition of health, involving several aspects of well-being, will also have to involve several different domains of a persons' everyday life. This includes the workplace, where most people spend a large part of their working lives. Furthermore, WHO states that "Work and leisure should be a source of health for people" and that "The way society organizes work should help create a healthy society" (WHO, 1986, p. 2). These statements stresses the important role that work has in our lives, and considering the definition of health, as stated by WHO, it is clear that there may be consequences beyond the loss of income when work participation is no longer possible.

Work is necessary for material well-being, individual and social identity and provides social contact, structure and a sense of personal achievement (Nordenmark & Strandh, 1999; Shepherd, 1989). Thus, the importance of work goes beyond the need to generate income, as it has the potential of being an important arena for health promotion. Similarly, Jahoda (1981) claims that work provides five basic human needs; time structure, collective purpose, social contact, status and activity, which together help establish mental health and well-being (Paul & Batinic, 2010). It has been found that the lack of these basic needs can cause unfavourable health outcomes for the unemployed, as well as those who are completely out of the labor force (not actively seeking a job) (Paul, Geithner, & Moser, 2009). In other words, work promotes full participation in society as well as personal independence (Waddell & Burton, 2006; Warr, 1987). It is well established that having a low socio-economic position, one possible consequence of losing income, often implies a lower degree of mental and physical health (Helsedirektoratet, 2008; Waddell & Burton, 2006). Furthermore, unemployment is associated with poorer general and mental health as well as higher mortality rates (Ferrie et al., 2001; Ferrie, Shipley, Stansfeld, & Marmot, 2002; Kessler, Turner, & House, 1989; Morris, Cook, & Shaper, 1994; Voss, Nylén, Floderus, Diderichsen, & Terry, 2004). Conversely, re-employment of those individuals who are sick or

disabled in some way have been found to be therapeutic and promoting in terms of improving health outcomes in general, including mental health (Boardman, Grove, Perkins, & Shepherd, 2003; Kessler et al., 1989; Waddell & Burton, 2006).

This holds true for the majority of all people, but it is also important to acknowledge that the nature of work varies, and some physical and psychosocial aspects of work may be hazardous to health. As a consequence, work may not be health promoting for a certain few (Björkqvist, Österman, & Hjelt-Bäck, 1994; Cooper, Hoel, & Faragher, 2004; Stansfeld & Candy, 2006). Nevertheless, research has shown that on the whole the beneficial effects of work often outweigh the harmful effects (Waddell & Burton, 2006). The importance of work to health is further underlined by research showing that job satisfaction is an important predictor of overall well-being (Argyle, Judge & Watanabe, referred to in Sousa-Poza & Sousa-Poza, 2000, p. 521).

Because work is a social determinant of health (Black, 2008; Dahlgren & Whitehead, 1991) it is important to invest in research and interventions aimed at maintaining and increasing employment. This may be especially important for those who are at risk of falling out of the workforce. The organization of a more inclusive worklife, promoting work participation for all, has been on the political agenda in Norway for more than a decade. One example is the 2001 Tripartite Agreement on a More Inclusive Workplace (also known as the ”IA agreement”). The agreement was a collaboration between different stakeholders in work life and the government. The main aim of the agreement was to create a more inclusive worklife for everyone who can and wants to work. The agreement works so that an enterprise that enters into a cooperation agreement with the Norwegian Labour and Welfare Service (NAV) becomes an “IA enterprise” and receive access to certain services and aids provided by NAV (NAV, 2012b). Another example is the *Lillestrøm Declaration of Workplace Health Promotion* (Statens arbeidsmiljøinstitutt, 2002), a result of the first conference on the topic of health promotion in the workplace. One of several goals described in the declaration is “to create workplaces which gives everyone the chance to make use of his or her resources and in this way contribute to sustainable economic growth and healthy, viable enterprises” (Statens arbeidsmiljøinstitutt, 2002). This resonates with the *Ottawa Charter for Health Promotion* in that the charter seeks to enable people to make use of their own resources in reaching their full health potential.

The governments’ focus on health promoting workplaces is also apparent through

various white papers such as *Recipe for a healthier Norway and National strategy to reduce social inequalities in health* (Helse- og omsorgsdepartementet, 2002, 2007) as well as its recognition for the importance of keeping people with mental health problems in the workforce (Arbeids- og inkluderingsdepartementet & Helse- og omsorgsdepartementet, 2007). Furthermore, the Working Environment Act §1-1 (2005) clearly states that its purpose is in part "to foster inclusive working conditions" ("Arbeidsmiljøloven," 2005) and

> to secure a working environment that provides a basis for a healthy and meaningful working situation, that affords full safety from harmful physical and mental influences and that has a standard of welfare at all times consistent with the level of technological and social development of society. ("Arbeidsmiljøloven," 2005)

Despite efforts from the government, NAV and other stakeholders, it seems the important and joint aim of a more inclusive work life has yet to be reached. Different health measures tell us that the Norwegian population has never been healthier, but we still see an increase in sickness absence and release of disability pensions (Nasjonalt Folkehelseinstitutt, 2010; OECD, 2013). This increase is most likely caused by multiple factors, but we do know that mental health problems (MHPs) account for a large proportion of the long-term sickness absence and instances of disability pension release (Nasjonalt Folkehelseinstitutt, 2010; NAV, 2011b). MHPs are considered one of the greatest health challenges today, with major consequences on national and individual levels (Black, 2008; Harvey, Henderson, Lelliott, & Hotopf, 2009; Nasjonalt Folkehelseinstitutt, 2010).

It is the common MHPs that are increasingly noted as reasons for sickness absence and disability, hence, MHPs do not necessarily have to be severe in order to have a serious impact on an individual's ability to work and maintain normal work functioning (Harvey et al., 2011; Lerner et al., 2004). Further, NAV reports that from 2000 to 2011 there has been a 20% increase in sickness absence due to mental illness, but for mild mental illnesses, such as common MHPs, there has been an increase of 145% (NAV, 2012a).

Research has shown that it is more prudent to focus on factors that are involved in work retention for specific high risk groups, rather than the population as a whole, as findings indicate that only a small percentage of the population are responsible for the majority of the sickness absence in Norway (Tveito, Halvorsen, Lauvålien, & Eriksen 2002). Those struggling with common MHPs can be said to belong to a "high risk group" with regard

to work participation. Further, work has the ability to contribute immensely to the psychological well-being of individuals (Merz, Bricout, & Koch, 2001) and the serious impact that MHPs have on society as well as individuals calls for a strong focus on factors that may be associated with work participation for people with MHPs. Many of the work factors found to be associated with psychological ill health and sickness absence, such as low control, lack of participation in decision making and lack of social support, are also factors that are amenable to change (Michie & Williams, 2003). Some of these factors are also related to employee job satisfaction, as job satisfaction is closely related to the working environment (Roelen, Koopmans, & Groothoff, 2008).

Job satisfaction has been found to influence overall life satisfaction (Judge & Watanabe, 1993). A. Sousa-Poza and A.A. Sousa-Poza (2000, p.521) refer to Argyle, as well as Judge and Watanabe, when claiming that job satisfaction is one of the three most important predictors of overall well-being. Because job satisfaction is relevant in relation to well-being, it holds a humanitarian value, and as such it has the ability to affect the health of the whole working population, which accounts for a large part of the population total. Previous studies have shown an association between psychosocial aspects of work and MHPs. One of the strongest associations was found between job satisfaction and subjective measures of psychological well-being, such as anxiety and depression (Faragher, Cass, & Cooper, 2005; Waddell & Burton, 2006). Furthermore, job satisfaction also has implications for job related behaviors such as sickness absence (Hoogendoorn et al., 2002; Labriola, Feveile, Christensen, Bültmann, & Lund, 2009), and has been found to be a significant predictor for intention to continue working in people with serious mental illness (Tan, Hawkins, & Thomas, 1999). The relationship between work environment and job satisfaction, and job satisfaction and health, implies that changes in the work environment could increase job satisfaction which could in its turn have a positive influence on work participation.

However, there is still little research on the relationship between job satisfaction and work participation for people with common MHPs. As work is important for health and job satisfaction has been found to be related to both health and work participation, further research on this relationship is warranted. This thesis will attempt to explore the possible relationship between job satisfaction and work life participation in people with common MHPs.

2. THEORY AND PREVIOUS RESEARCH

This section will present a theoretical and empirical framework necessary for understanding the assumption that job satisfaction is associated with work participation in people with common MHPs. The health promotion perspective is important in providing a framework for how to approach a topic such as health promotion in the workplace. Health promotion adapts a holistic approach, which is maintained in this thesis, by including two different theories of how work is related to health and to further work participation. The Demand/Control model and the Cognitive Activation Theory of Stress (CATS) complement each other by giving insight into two different approaches to this subject, with one focusing on the psychosocial environment and the other on the individual's interaction with the work environment.

2.1 Health promotion

This thesis is a part of the master's degree programme Health Promotion and Health Psychology. The health promotion perspective is therefore an important part of the framework for this study.

The ideology of health promotion distinguishes it from "health prevention". While health prevention focuses on reducing or removing risk factors for disease and illness, health promotion is more concerned with the positive influences on health, that is, positive resources for health (Mæland, 2010). Aaron Antonovsky was an important contributor to the development of the health promotion perspective, and introduced the term salutognesis. The salutogenic approach is focused on factors that contribute to our health and well-being (Antonovsky, 2000), unlike the traditional approach to health, which has been mostly concerned with factors related to ill health. Further, Antonovsky was especially concerned with stress, health and coping. Antonovsky was interested in why people seemed to have different health outcomes after being faced with life stressors. He further claimed that the health outcome depended on individual. Consequently, stress was not necessarily seen as bad for your health, but that it would depend on the coping abilities of the individual (Antonovsky, 2000).

The foundation for health promotion lies within WHO and the *Ottawa Charter for Health Promotion* (WHO, 1986). The first international conference on health promotion was held in Ottawa, Canada, in 1986 and resulted in the *Ottawa Charter* (WHO, 1986). Because it

embodies the ideology, goals and strategies for achieving "health for all" it is still viewed as the cornerstone of health promotion. The charter defines health promotion as

> the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being. (WHO, 1986, p. 1)

Health promotion focuses on the social determinants of health and according to Dahlgren and Whitehead (1991) those include individual lifestyle factors, social and community networks, living and working conditions (including work environment and unemployment) as well as general socio-economic, cultural and environmental conditions (see figure 1) (Dahlgren & Whitehead, 1991). Health promotion aims to influence all the determinants that have the ability to affect our health and to make it possible for as many people as possible to participate in the activities that affect positive health (Sletteland & Donovan, 2012, p. 24).

"Empowerment" is an important and central term that can be viewed both as a means and a goal within health promotion (Sletteland & Donovan, 2012). To empower individuals is to make people feel that they have influence over the determinants that affect their own health. The objective is to increase empowerment through educating people about the determinants of health and making them active participants in creating a healthier society (Mæland, 2010). Consequently, the view of health promotion is that our health is not solely the responsibility of the health sector, but believed to be largely created and maintained outside of the health sector, by contributors such as governemnts, social and economic sectors, non-governmental and voluntary organizations, local authorities as well as industry and the media (WHO, 1986). Thus, health promotion requires collaboration across all types of sectors and organizations.

Some of the foundations incorporated in the health promotion perspective, are of relevance to this study. To most people work participation has a positive influence on health

and well-being. In line with this understanding, interventions aimed at increasing job satisfaction may be seen as a salutogenic approach, in that job satisfaction has been found to have a positive influence on health, well-being and work participation.

Another relevant health promotion concept, is empowerment. According to Kanter (1979), workers may feel empowered when they have access to to resources, support and information, as well as access to challenge, growth and development. Empowerment in the workplace has also been found to be associated with greater job satisfaction (Sarmiento, Laschinger, & Iwasiw, 2004), and may be obtained through organizational changes and through mobilization of individual resources. This will be further addressed in relation to the Demand/Control model and the Cognitive Activation Theory of Stress (CATS).

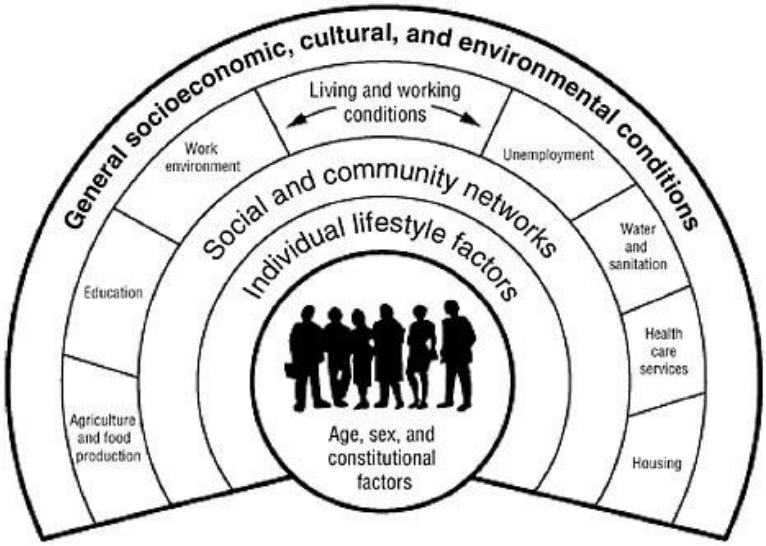

Fig.1 The main determinants of health (Dahlgren and Whitehead, 1991).

2.2 Cognitive Activation Theory of Stress (CATS)

CATS (Ursin & Eriksen, 2004) is suggested to be a possible psychobiological explanation for the relationship between worklife and individual health. According to Eriksen and Ursin (2010), CATS has the ability to predict the majority of cases of sickness absence and disability. The theory further offers an individual approach to undersanding the relationship between work environment and health (Svensen, Arnetz, Ursin, & Eriksen, 2007, p. 569), different from other theories that have been more concerned with the psychosocial

environment, such as the Demand/Control model.

CATS aims at explaining how physiological and psychological consequences depend on the individual's cognitive evaluations (see figure 2) (Ursin & Eriksen, 2004). Stress is an important factor in the relationship between work and health and a lot of research has been done in relation to this topic.

CATS uses the term stress in four different ways; stress stimuli, stress experience, the nonspecific general stress response and the experience of the stress response. CATS does not focus on stressors, because whether a stimulus is perceived as stress depends on the individual's assessment of the situation. Such individual assessment depends on former experience, which is very important in terms of having a positive or negative response outcome expectancy. Further, the stress experience depends on how stimuli are evaluated by the brain. CATS claims that stress is a healthy, necessary and normal response that may only lead to illness and disease if sustained over a longer period of time (Ursin & Eriksen, 2004).

"Expectancy" is a very important concept within the CATS theory and is defined as "information stored in the brain" (Ursin & Eriksen, 2004, p. 573). Response outcome expectancies are defined as positive, negative or none. A positive response outcome expectancy is referred to as *coping*. This means that when an individual establishes an expectancy of being able to cope, the stress response is reduced and there is no longer a health threat, in healthy individuals (Ursin & Eriksen, 2004). A negative response outcome expectancy is defined as *hopelessness* (Ursin & Eriksen, 2004) and is the expectancy that most responses will lead to a negative result. In hopelessness, there is a level of control, meaning that the responses have effects, but the effects are negative (Ursin & Eriksen, 2004). Hopelessness is suggested to be a good model for depression, because having some level of control, implies that the outcome can be attributed to the individual, which could further introduce feelings of guilt. Feelings of guilt are common in depression (WHO, 2012). *Helplessness*, is the expectancy that there is no relationship between what the individual does and the outcome, hence there is no control (Ursin & Eriksen, 2004). Both hopelessness and helplessness may be followed by sustained activation and risk of illness.

In a working situation employees will face stressors, such as for example high demands and low control, but according to CATS, the outcome of the stressors in the workplace depends on whether the individual is able to cope with it. Svensen, Arnetz, Ursin

and Eriksen (2007) suggest that job dissatisfaction is associated with negative response outcome expectancies, which according to CATS could lead to potential illness and possible sick leave and disability. Further support for this association is that having a negative affectivity has been found to be related to job dissatisfaction (Connolly & Viswesvaran, 2000), underlining the relevance of CATS in this study.

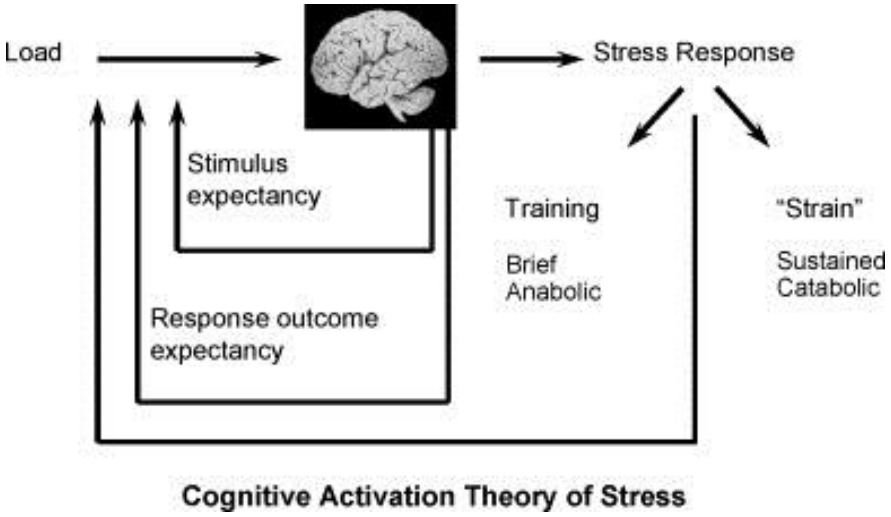

Fig. 2 The CATS model (Ursin & Eriksen, 2004)

2.3 The Demand/Control model

The two most common and influential theories describing how the work environment may affect health outcomes (OECD, 2008) are the Demand/Control model (Karasek & Theorell, 1990) and the Effort/Reward imbalance model (Siegrist, 1996). Both models have been associated with mental health (Siegrist, 1996; Stansfeld & Candy, 2006). However, a large review concluded that demands and control were particularly important aspects in explaining the causal relationship between psychosocial aspects of work and mental health (Waddell & Burton, 2006).

The Demand/Control model is concerned with the psychosocial work environment. The psychosocial work characteristics imply risk factors that are involved with psychological processes linked to the social environment of work that may be important in the development of work related illness (Stansfeld & Candy, 2006, p. 443). Karasek (1979) described two important factors in relation to the psychosocial work environment,

psychological job demands and decision latitude (control) (see figure 3). These two concepts are the main elements of the Demand/Control model and both have been found to be risk factors for common mental disorders (Stansfeld & Candy, 2006).

Decision latitude is defined as the combined concept of skill discretion and decision authority, meaning the possibility of growth and learning (skill discretion) and the ability to exercise control over the way the work is performed (decision authority). The demands refer to the demands that the employer or workplace put on the employee (Karasek & Theorell, 1990). Examples may be work hours, time pressure and intensity of the work tasks.

The model identifies four types of jobs (see figure 3) and claims that the combination of high demands and low control (decision latitude) produces the largest risk of stress related illness, and vice versa, low demands combined with high control gives the least risk of illness (Karasek & Theorell, 1990; Reme, Eriksen, & Ursin, 2008). Jobs with high demands and low control are so called high-strain jobs and may cause psychological strain such as fatigue, anxiety, depression and physical illness (Karasek & Theorell, 1990).

Low-strain jobs are characterized as having few psychological demands and high levels of control. This type of job has the ability to make people happier and healthier, according to the authors. The third type of job described, is the passive job which is characterized by both low demand and low control. This situation might cause the employee to experience negative learning and even loss of skills, resulting in loss of work motivation and productivity (Karasek & Theorell, 1990). The last type is the active job, which is characterized by high demands, however, the worker feels that he has sufficient control over work tasks and the freedom to use available skills. This combination of high demands and high control is typical for challenging and professional work, and has only a moderate chance of psychological strain. This type of job has also been found to lead to high levels of job satisfaction (Karasek, 1979).

In addition to the concepts of demand and control, social support is a third dimension to the model, defined as the "(…)overall levels of helpful social interaction available on the job from both co-workers and supervisors" (Karasek & Theorell, 1990, p. 69). It includes both instrumental and emotional support, from both colleagues and managers. It has been shown that the outcome of job strain is worse with the additional strain of low social support (Karasek & Theorell, 1990). A good relationship with colleagues and supervisors are also important determinants of job satisfaction (Lu, While, & Barriball, 2005; Sousa-Poza &

Sousa-Poza, 2000), and a poor relationship with colleagues and supervisors are risk factors for sickness absence in people with MHPs (Foss et al., 2010).

The Demand/Control model is particularly good at predicting cardiovascular disease (Karasek & Theorell, 1990), but has also been associated with a risk of developing common mental health disorders (Karasek, 1979; Stansfeld & Candy, 2006).

Karasek (1979) found that job satisfaction measures showed variation with the activity level of the job, where active jobs were associated with satisfaction even though demands were high. The explanation was that the active job situation leads to "desirable stress" in terms of increased motivation and learning opportunity (Theorell & Karasek, 1996). Furthermore, the study found that changes could be made to improve job-related mental-health without sacrificing productivity, merely by increasing decision latitude. Using a job strain model, the study predicted that mental strain results from the interaction of job demands and job decision latitude. The same combination has also been associated with job dissatisfaction (Karasek, 1979).

The control aspect of the Demand/Control model may be seen as a concept that leads to self-empowerment, meaning that an individual having control (decision latitude) possesses a high degree of actual power through a genuine potential for making choices (Tones & Tilford referred to in Tones & Green, 2010, p. 43). This may very well be facilitated through organizational changes. In relation to CATS, empowerment may be seen as a result of organizational changes that mobilizes the resources available in each employee, leading to positive work experiences and coping.

In summary, organizational changes, or work directed interventions, have the ability to lead to positive health outcomes through organizing the workplace in a manner that is balanced with regard to demands and control. This may further lead to positive work experiences and positive respose outcome expectancies when an individual is faced with job strain. Having positive response outcome expectancies, coping, may further lead to more satisfied workers and increased work participation.

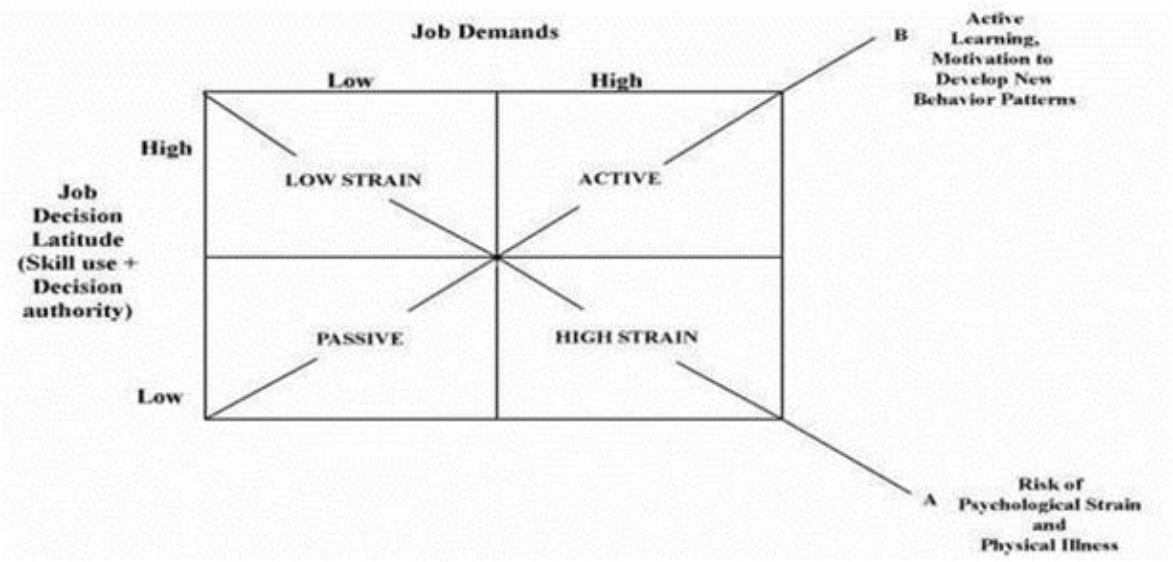

Fig. 3 The Demand/Control Model (Karasek and Theorell, 1990).

2.3.1 The Demand/Coping Model

Karasek and Theorell eventually put more emphasis on individual stress management and individual coping abilities (Eriksen & Ursin, 1999; Karasek & Theorell, 1990), acknowledging the relationship between organizational factors and the individual. Eriksen and Ursin (1999) developed a new model, where they replaced "control" with "coping" (Eriksen & Ursin, 1999). They used the term coping as it is described in CATS, as an expectancy of positive outcomes. The most important difference between the Demand/Control model and the Demand/Coping model is the focus on the objective organization of the work in the Demand/Control model, while the Demand/Coping model's main focus is on the subjective outcome expectancy (Eriksen & Ursin, 1999, p. 249). Using the Demand/Coping model they were able to conclude that subjective health complaints were more dependent on that combination, than the Demand/Control combination, meaning that individual coping skills had a larger influence on subjective health complaints than organizational factors (Eriksen & Ursin, 1999).

2.4 Comments on theoretical framework

The Demand/Control model focuses on the objective factors of work. The objective factors are often the focus of interventions aimed at improving the psychosocial environment in the workplace. However, critics may raise questions about the actual

objectivity of the characteristics of the model. Is it really possible to measure the psychosocial environment objectively, without the interference of individual factors, such as affectivity? Work related factors such as job satisfaction, are most often measured subjectively with the use of a questionnaire. This means that it is the respondent's perception of the working conditions that is measured, not the objective working conditions. Although the model sees the objective characteristics of the workplace as the most important determinants of adverse health outcomes, Karasek and Theorell also acknowledges the influence of individual characteristics on the psychosocial work environment and assert that individual characteristics to some degree affect the impact of the psychosocial environment. They further explain that in order to cause for instance heart disease, there must be an interaction between the psychosocial work environment and individual factors such as perception, coping and physiological functioning (Karasek & Theorell, 1990).

Although CATS values coping as being more important than control, it may be argued that these factors are interrelated. Reme, Eriksen and Ursin (2008) emphasizes that it is not enough to have control, the individual must also expect that having control leads to a positive result. When actual control is combined with positive outcome expectancies the predictive power increases (Eriksen & Ursin, 1999). If a person is repeatedly subjected to a work situation where there is an imbalance of demands and control, leading to job strain, this may lead to the development of negative response outcome expectancies, helplessness or hopelessness, and increased risk of illness. Furthermore, level of job satisfaction may be determined by the individual's experiences with work, where a development of positive response outcome expectancies may lead to job satisfaction, and the development of negative response outcome expectancies may lead to job dissatisfaction.

CATS was included as part of the theoretical framework for this paper, although response outcome expectancies were not measured. However, CATS represents a perspective on how individual characteristics, such as coping, helplessness and hopelessness may affect the way we perceive our working environment, how we respond to it and ultimately how our responses affect our health and further level of work participation. In this sense, CATS contributes with a valuable addition in understanding the association between job satisfaction and work participation as the Demand/Control model primarily focuses on the environmental conditions of work and its impact on employee health. However, CATS

lacks the level of empirical support that the more established, older theories such as the Demand/Control model has. Consequently, there are no validated and reliable scales developed to measure the constructs of CATS; positive response outcome expectancy, negative response outcome expectancy and no response outcome expectancy (referring to coping, hopelessness and helplessness respectively).

2.5 Job Satisfaction

As of today, the existing literature base on job satisfaction is comprehensive. Job satisfaction has been said to be the most widely studied subject within the field of work and organizational psychology (Dormann & Zapf, 2001; Spector, 1997). As one starts to examine some of the existing literature it becomes clear why. The term job satisfaction is complex, in part because of problems related to definition of this concept. Job satisfaction is a multidimensional concept which includes both environmental as well as individual factors (Roelen, Koopmans, & Groothoff, 2008). One of the most prominent discussions within the literature concerns the determinants of job satisfaction. Specifically, whether job satisfaction is influenced by personological factors or if it is mainly influenced by specific workplace characteristics, or if it is perhaps a combination of both.

2.5.1 Individual determinants of job satisfaction

Recognition of individual factors' influence on job satisfaction have been present in early research on the subject, but it has only been a consistent part of the job satisfaction research since the mid-eighties (Judge & Larsen, 2001). In the past, the traditional approach to job satisfaction has been on characteristics of work such as the ability to meet the employee's needs, both physical and psychological (Spector, 1997). However, over time, job satisfaction research has become more centered on cognitive processes. As a result, job satisfaction is often perceived as an attitudinal variable, in part based on individual characteristics (Spector, 1997; Weiss, 2002).

Locke's definition of job satisfaction is often referred to in the job satisfaction literature. He defines it as a "pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1300). Lu, Barriball, Zhang and While (2012) claim that the traditional model of job satisfaction is simply "all the feelings that an individual has about his job" (p.1018). They further emphasize that whether or not an employee is satisfied with their job will also depend on the expectations that an

individual has concerning what their job should provide for them (Lu, Barriball, Zhang, & While, 2012). As CATS emphasizes, these expectations are important in determining whether the outcome will be positive, negative or none, and in this case, if it leads to job satisfaction or dissatisfaction.

Above, job satisfaction is described both as an attitudinal and an affective variable. It seems that in the literature, the two concepts are often presented as the same thing. However, Weiss (2002) suggests that attitude and affect are not the same, but are in fact two different, distinctive constructs. He also emphasizes that he believes that job satisfaction is an attitudinal variable and clarifies that "an attitude is not an affective reaction. An attitude is an evaluation or evaluative judgment made with regard to an attitudinal object, and evaluation is not synonymous with affect." (Weiss, 2002, p. 175). Whether or not job satisfaction is in fact an attitudinal or affective variable, it is likely that when we evaluate our jobs processes such as cognition and affect are involved (Judge & Larsen, 2001). As Judge and Larsen (2001) explains "When we think, we have feelings about what we think. When we have feelings, we think about what we are feeling." (Judge & Larsen, 2001, p. 74), so the two are not necessarily mutually exclusive. This notion is supported by other studies, showing that both cognition and affect contribute to job satisfaction (Connolly & Viswesvaran, 2000; Judge & Larsen, 2001; Moyle, 1995).

2.5.2 Environmental determinants of job satisfaction

A main difference between the personological and the environmental determinants is that working conditions can be influenced by managers, and therefore working conditions have been an important and necessary focus within occupational health practice (Roelen, Koopmans, & Groothoff, 2008). Organizational factors have long been recognized as having important influences on job satisfaction (Acker, 2004; Roelen, Koopmans, & Groothoff, 2008) and many studies have tried to identify key determinants of job satisfaction. The term job satisfaction can refer to one's satisfaction with the job as a whole or satisfaction composed of different facets of the job (Einarsen & Skogstad, 2011; Roelen, Koopmans, & Groothoff, 2008). According to Roelen, Koopmans and Groothoff (2008), the most important determinants are task variety, working conditions, workload and career perspectives. A cross-national survey by Sousa-Poza and Souza-Poza (2000), where they compared work-role outputs (e.g. pay) to work-role inputs (e.g. effort), found that having an interesting job and

good relations with management were the two most important work-role outputs, while having an exhausting job was the most important work-role input. Countries with high work-role outputs in general, also had a high ranking of job satisfaction and vice versa (Sousa-Poza & Sousa-Poza, 2000). Another study showed similar results, concluding that important determinants of job satisfaction were task autonomy, task identity (professional status), task variety, salary, feedback, promotional opportunities, praise by supervisors, cohesion with colleagues, collaboration with the staff, working conditions, and strength of the organizational culture (Lu et al., 2005). Similar to the facets mentioned above, Spector (1997) refers to Hackman and Oldham's Job Characteristics Model (Hackman & Oldham, 1976) and identifies five core characteristics that are likely to determine how motivating a job is likely to be, which in turn could lead to satisfied employees. The five characteristics were skill variety, task identity, task significance, autonomy and job feedback (Hackman & Oldham, 1975; Spector, 1997).

In summary, it is likely that both environmental factors, such as working conditions, and individual factors are involved in job satisfaction (Einarsen & Skogstad, 2011; Spector, 1997). Skogstad and Einarsen (2011) claim that the psychosocial work environment relates to three different aspects. External influences relate to characteristics of the environment, such as work organization. However, psychosocial work environment can also relate to cognitive processes and the characteristics of the individual, which influences our individual perception of the workplace. The way we as individuals interpret our working conditions can in turn lead to different health outcomes. The third aspect is the consequence of interactions between these two aspects, such as job satisfaction, well-being, burnout, sickness absence, turnover and efficiency (Einarsen & Skogstad, 2011). The manner in which the psychosocial work environment is described here makes it clear how the Demand/Control model is related to the first aspect (work organization), while CATS is related to the second aspect. The third aspect is concerned with how interactions between these factors have consequences for aspects such as job satisfaction. The importance of interaction described, is also in line with the holistic approach adapted by health promotion, which values the importance of the interaction between individual and environment for health (Tones & Green, 2010). Furthermore, job satisfaction is clearly composed of multiple factors, one can not rule out that individual factors, such as affectivity, might be of specific importance in a study population with MHPs (Moyle, 1995).

2.6 Mental health problems (MHPs)

2.6.1 Definition and diagnostic criteria

MHPs concerns everything from mild complaints of depression or anxiety to severe MHPs such as schizophrenia. However, a common trait for all mental illnesses is that they affect aspects of life such as the way we think, feel, behave and ultimately our social life (Reissig, 2010).

Anxiety is a collective term referring to all conditions where the main symptom is anxiety towards an object or situation, or an unspecific type characterized by prolongued sense of worry/concern, bodily tension, with influence on bodily functions (DSM-IV, 2011; WHO, 2012).

Depression is characterized by lowering of mood, lack of feeling of meaningfulness in one's existence, lack of interest in other people and daily activities and lack of energy. Sleeping and eating patterns are also often affected. In addition, people experiencing depression often have feelings of guilt and low self-esteem, even with people who are mildly affected. Duration and severity of the symptoms vary greatly (DSM-IV, 2011; WHO, 2012).

One definition of mild mental health complaints is "few, if any, symptoms in excess of those required to make the diagnosis are present, and symptoms result in no more than minor impairment in social or occupational functioning"(DSM-IV, 2011, p. 2). Moderate complaints are defined as "symptoms or functional impairment between "mild" and "severe" are present" (DSM-IV, 2011, p. 2). Finally, severe complaints means that one has "many symptoms in excess of those required to make the diagnosis" and these symptoms may result in "marked impairment in social or occupational functioning" (DSM-IV, 2011, p. 2).

The American Psychiatric Association's *Diagnostic and statistical manual of mental disorders (4th ed.)* (DSM-IV, 2011) and *ICD-10: International statistical classification of diseases and related health problems* (WHO, 2012) is the commonly used references with regard to the the diagnostic criteria for mental disorders. Throughout this thesis the study population is referred to as having common MHPs, because there were no requirements of having a formal diagnosis to be included in the study and no diagnostic assessment was performed. Hence, the data on mental health is solely based on the participants' self-reporting mild or moderate MHPs. This also includes their responses to questions on mental health at baseline.

2.6.2 Prevalence and consequences

MHPs are a leading cause of sickness absence and disability benefit release in most high-income countries (Black, 2008; Harvey et al., 2009; Shiels, Gabbay, & Ford, 2004), with mild MHPs accounting for as much as 40% of the certified sickness absence (Shiels et al., 2004). It is estimated that about fifty percent of the Norwegian population will experience symptoms consistent with MHPs during their lifetime (Kringlen, Torgersen, & Cramer, 2001). The most common mental health problems are depression, anxiety and illness related to substance abuse (Kringlen et al., 2001; OECD, 2012; Reissig, 2010), and they are more prevalent in women than in men (with the exception of substance abuse) (Kringlen et al., 2001), and in people with a lower socioeconomic status (Fryers, Melzer, & Jenkins, 2003). Minor psychological morbidity is very common in the working population and most people cope with these problems without sickness absence, however MHPs are the second largest reason for sickness absence in Norway (NAV, 2011b) (see figure 4) and it is those commonly referred to as mild or moderate that account for a substantial part of the increase in sickness absence and release of disability benefits (Black, 2008; Harvey et al., 2009; NAV, 2012a).

Further, the often early onset of MHPs (Kessler, Berglund, et al., 2005) leads to disability pensions on average being awarded to younger individuals compared to disability pensions awarded for any other disorder, which results in more working years lost for people with MHPs (Knudsen, Øverland, Hotopf, & Mykletun, 2012). More working years lost means that even though it is only the second most noted reason for awarding disability pension, MHPs is still the disability that may cost society the most over time.

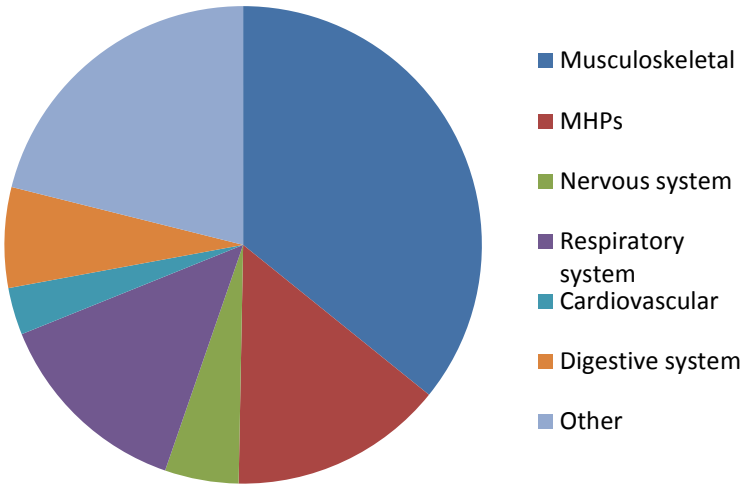

Fig. 4 Sickness episodes by diagnosis. Reported by GPs. 3rd quarter of 2012 (NAV, 2012d).

Aside from the societal consequences, MHPs also have major consequences for the individual. People with MHPs are more likely to be unemployed. A person with a severe mental disorder has a nine-fold unemployment rate compared to the national average (OECD, 2013, p. 13). People with common MHPs who have been absent from work due to common MHPs also have increased risk of recurrent absence due to common MHPs (Koopmans et al., 2010). Reccurrence incidence have been found to be similar in men and women, however women under 45 years were found to have an increased risk of reccurrence compared to women over 45 years (Koopmans et al., 2010). Other risk factors for sickness absence due to common MHPs are lower educational levels and low support from superiors (Foss et al., 2010).

Losing one's job has been found to be detrimental for the individual and can lead to a worsening of mental as well as general health (Waddell & Burton, 2006) and therefore have serious consequences. A strong association has been found between unemployment and several adverse health outcomes, both physical and mental (Jin, Shah, & Svoboda, 1995). However, the direction of causality between unemployment and health is not necessarily straight forward. The health effects are likely mediated through several factors such as socioeconomic status, poverty and financial anxiety (Fryers et al., 2003; Nordenmark & Strandh, 1999; Weich & Lewis, 1998). Being unemployed and losing income affects

socioeconomic status, and there is a strong social gradient in physical and mental health as well as mortality (Fryers et al., 2003; Helsedirektoratet, 2008).

2.6.3 Risk factors and moderators

MHPs are complex and it is assumed that these can in part be caused by hereditary factors (Kendler, Gardner, Gatz, & Pedersen, 2007), and in part by environmental factors (Bronfenbrenner, 1986), some of which are related to work. Characteristics of the workplace such as job strain, low decision latitude (control), low social support, high psychological demands, effort–reward imbalance, and high job insecurity have shown to predict common MHPs (Stansfeld & Candy, 2006).

Other factors include solitude, social isolation, lack of social support (Dalgard & Håheim, 1998), poor economy and a low socioeconomic position (Lorant et al., 2003), smoking (Mykletun, Overland, Aarø, Liabø, & Stewart, 2008) and lack of physical activity (Bahr, 2009). Socio-economic position has been found to predict severe mental disorders, but with regards to the common MHPs, the findings are more unclear (Kivimäki et al., 2007). Some of the factors explaining the association between socioeconomic position and mental illness are lack of confidence in one's coping skills and powerlessness, as well as lack of social support, smoking, financial problems and somatic illness (Mykletun & Knudsen, 2009b). On a more individual level, a life crisis such as the dissolution of a relationship or marriage, or even living in a problematic relationship have also been found to act as a risk factor for developing psychiatric disorders (Amato, 2000).

Furthermore, some of the most important factors that have a protective role in the development of MHPs are social support (Cattan, White, Bond, & Learmouth, 2005) and the development of coping skills (Cuijpers, Muñoz, Clarke, & Lewinsohn, 2009). These are factors that are also important in the relationship between work and health (Karasek & Theorell, 1990; Ursin & Eriksen, 2004).

2.6.4 Comorbidity

Individuals with MHPs often experience comorbidity with somatic disorders and pain conditions (Bair, Robinson, Katon, & Kroenke, 2003; McWilliams, Goodwin, & Cox, 2004) such as those referred to as subjective health complaints or medically unexplained physical symptoms (Henningsen, Zimmermann, & Sattel, 2003). Studies have also shown that comorbidity with anxiety or depression can increase the severity and the functional

outcomes of the other disorders (Kessler, Chiu, Demler, & Walters, 2005; Kessler & Frank, 1997).

Some of the most commonly presented symptoms in patients suffering from depression are lack of energy, headache, back pain and dyspepsia (Værø & Merskey, 1997). The relationship between pain and depression has been suggested to be particularly strong with muscular pain (Magni, Moreschi, Rigatti-Luchini, & Merskey, 1994) and it has been shown that people with chronic musculoskeletal pain have more often depression than those who do not (Magni, Caldieron, Rigatti-Luchini, & Merskey, 1990).

Subjective health complaints can be defined as "normal" complaints that are very common in the general population, but might be classified as disease or illness when experienced at a certain level (Ihlebæk, Eriksen, & Ursin, 2002). They include a variety of different symptoms and they all have in common that there is no known physical cause nor verifiable organic changes (Eriksen , Ihlebæk , & Ursin 1999). The most common subjective health complaints are muscle pain, pseudoneurology (i.e. sleep problems or mood changes) and unspecific gastrointestinal problems (Eriksen & Ursin, 2004).

Subjective health complaints are responsible for a very large part of the total amount of sickness absence and disability pension release in Norway (see figure 4) (Ihlebæk et al., 2002; NAV, 2011b) and the prevalence of complaints are high, with as much as 96% of the normal, Norwegian population reporting at least one complaint during the preceeding thirty days (Ihlebæk et al., 2002). One study showed that musculoskeletal complaints were reported most frequently, by 80%. However, only 13% reported the musculoskeletal complaints as substantial (Ihlebæk et al., 2002), which highlights the problem of defining when we are talking about "normal" complaints and when the complaints are a serious condition, as there is no clear cut-off point. This also poses a problem in terms of treatment and diagnosis (Eriksen & Ihlebæk, 2002). The line between the two is unclear, however we do know that in some people these complaints develop and have such an impact on people's lives that they require medical assistance of some kind (Ihlebæk et al., 2002). Psychobiological sensitization, one result of sustained activation, has been suggested to be one possible explanation for the individual differences of tolerance and acceptance of common health complaints, and comorbidity (Eriksen & Ursin, 2004). For example, anxious people have been found to detect fear-related information earlier than other people

(Eriksen & Ursin, 2004), which Brosschot explains as cognitive emotional sensitization (Brosschot, 2002).

Musculoskeletal complaints have been shown to cause about 45% of long-term sickness leave and nearly 33% of permanent disability pension benefits (Ihlebæk et al., 2002). There are gender and age differences in reporting both prevalence and degree of complaints. Women have shown higher prevalence as well as more intense complaints (Ihlebæk et al., 2002).

There are inconsistent findings in reporting the relationship between job satisfaction, sickness absence and subjective health complaints. However, the inconsistency seem to be largely related to studies concerning lower-back pain (e.g. Hestbaek, Leboeuf-Yde, & Manniche, 2003; Steenstra, Verbeek, Heymans, & Bongers, 2005; van der Giezen, Bouter, & Nijhuis, 2000; Williams et al., 1998). One review reported that there were only few data available on the relation between job satisfaction and musculoskeletal trouble, however most of the cross –sectional studies reported a relationship between psychosocial variables and symptoms of the neck or shoulders (Bongers, Winter, Kompier, & Hildebrandt, 1993). Furthermore, satisfied workers report on average five to six complaints, which corresponds to the prevalence of subjective health complaints found in the general Norwegian population (Ihlebæk et al., 2002; Svensen, Arnetz, Ursin, & Eriksen, 2007).

2.7 Sickness absence/Disability

In Norway, it is the Norwegian Labour and Welfare Administration (NAV) who are responsible for granting sickness benefits. However, it is the General Practitioner's who are (GP) responsible for granting sickness absence. Norway has full compensation for sickness absence up to a year. The first 16 days are covered by the employer and the remaining period is covered by the National Insurance Scheme, with a limitation of 52 weeks (Arbeidsdepartementet, 2011). If you are still unable to work after one year, you might be eligible for other benefits such as work assessment allowance or a disability pension. In addition, Norwegians are able to take three days of sickleave, four times a year, without consulting a doctor (NAV, 2012c). In Norway, eight weeks is normally considered the starting point for long-term absence (Bratberg, Gjesdal, & Maeland, 2009), because this is the time when the physician has to complete an eight-weeks sickness certificate, including a diagnosis and plans for treatment and rehabilitation (NAV, 2011a).

The disability pension is a more permanent compensation for income loss and can be granted to individuals aged 18-66. The purpose is to ensure income for anyone who have had their earning abilities reduced by at least fifty percent due to an illness, disease, injury, or disability accepted as a medical condition, and where there is little or no chance of improving working capacity. The term "disability pension" refers to an official benefit given in Norway. The size of the disability pension depends on previous income, supporting responsibilities and years of active work participation (Arbeidsdepartementet, 2011).

A number of different risk factors (not specifically for people with MHPs) associated with sickness absence have previously been identified through research. As mentioned, one such factor is job satisfaction. Examples of other risk factors are high physical workload (Hoogendoorn et al., 2002) repetitive monotonous work, low skill discretion, low decision authority, smoking, obesity, poor self-rated health, female gender (Labriola, Lund, & Burr, 2006) and shift work (Dionne & Dostie, 2007).

2.8 Relevant previous research

2.8.1 Job satisfaction, health and well-being

The workplace is an important and large part of many people's lives. It is therefore conceivable that our worklife affect our well-being. According to previous research, job satisfaction has the ability to influence overall life satisfaction (Judge & Watanabe, 1993) and some have also claimed that job satisfaction is one of the three most important factors influencing overall well-being (Argyle, Judge & Watanabe, referred to in Sousa-Poza & Sousa-Poza, 2000, p. 521). Oppositely, dissatisfaction with work has been found to be hazardous and damaging to an employee's well-being (Faragher et al., 2005). Furthermore, Judge and Watanabe (1993) found that the job satisfaction – life satisfaction relationship was significantly and reciprocally related, which emphasizes the importance of the workplace in promoting health, as also highlighted in the *Ottawa Charter* (WHO, 1986).

2.8.2 Job satisfaction in relation to work participation

A great deal of the research on work participation and common MHPs have been concerned with factors contributing to Return To Work (RTW) or non-RTW (Andersen, Nielsen, & Brinkmann, 2012; Flach, Groothoff, Krol, & Bultmann, 2012; Noordik et al., 2013). Further, work directed interventions have been done for the purpose of reducing "time-to-

full return", some with promising results (Schene, Koeter, Kikkert, Swinkels, & McCrone, 2007), while other studies have reported less successful results (Rebergen, Bruinvels, Bezemer, van der Beek, & van Mechelen, 2009). The different results in RTW studies are perhaps a reflection of the complexity of the process, as we know that its success depends on multiple factors (Franche & Krause, 2002).

One study suggested that factors associated with hindering or facilitating RTW for people with common MHPs could be grouped into three categories; factors related to the employee, factors related to the work context and factors specifically associated with the RTW process (Lemieux, Durand, & Hong, 2011), similar to the findings of another study (Andersen et al., 2012). Among specific factors found to promote RTW for people with common MHPs are personality, social support at the workplace and work-related factors (e.g. work load, emotional demands, decision authority and skill discretion) (Andersen et al., 2012; Flach et al., 2012). A review investigating work related factors related to psychological ill health, found that work related factors were amenable to change, for example through making organizational changes that increased participation in decision making and support, which further reduced sickness absence and psychological ill health (Michie & Williams, 2003). This finding lends support to the important relationship between the environment (Demand/Control model) and the individual (CATS), and the overall importance of empowerment in the workplace.

In the context of work participation and RTW, job satisfaction has been thoroughly studied**.** There is a vast amount of existing literature on job satisfaction in relation to work participation, however, to the best of my knowledge there are only a few studies on job satisfaction in study populations with common MHPs. Consequently, little is known about level of job satisfaction in common MHPs, or the influence of job satisfaction on work participation in such a population. I will therefore first present empirical evidence on the association between job satisfaction in relation to work participation in general, then the studies on job satisfaction and work participation in common MHPs specifically.

Low job satisfaction has been found to act as a risk factor for disability pension and sickness absence (e.g. Hoogendoorn et al., 2002; Krause et al., 1997; Labriola et al., 2009; Roelen, Koopmans, Notenbomer, & Groothoff, 2008). Studies have concluded that investment toward a satisfactory work environment might be a low-cost way of ensuring employee health and work retention (Böckerman & Ilmakunnas, 2008; Gupta & Kristensen,

2008; Labriola et al., 2009). This is in accordance with findings from another study, concluding that interventions aimed at RTW of employees sicklisted with lower back pain should target psychosocial aspects such as job satisfaction (van der Giezen et al., 2000).

Some studies have reported a significant relationship between job satisfaction and the length of sickness absence (Roelen, Koopmans, Notenbomer, et al., 2008), which corresponds to findings that job satisfaction is a significant predictor for the intention of RTW following sick leave (Froom, Melamed, Nativ, Gofer, & Froom, 2001; Tan et al., 1999; van der Giezen et al., 2000). However, other studies have found no significant relationship between job satisfaction and sickness absence (Steenstra et al., 2005). The inconsistent findings within the literature seem to be present mainly within research concerning job satisfaction and self-reported back-pain (Bongers et al., 1993; Iles, Davidson, & Taylor, 2008).

Furthermore, several studies have suggested a relationship between job satisfaction and health and work related behavior, but less is known about this in relation to people with common MHPs. However, a large meta-analysis concluded that there was a very strong relationship between job satisfaction and psychological/mental problems, especially anxiety, depression and burnout (Faragher et al., 2005). The study further concluded that organizations should develop stress management policies in any attempt to identify and remove factors contributing to job dissatisfaction, when aiming at improving employee health (Faragher et al., 2005). The report *OECD Employment Outlook 2008* also reported that work-related MHPs have often been associated with job dissatisfaction (OECD, 2008).

Although studies have shown a strong association between job satisfaction and MHPs and job satisfaction has been found to be a factor influencing RTW and work retention in other study populations, it seems that research on the relationship between job satisfaction and work participation is limited in relation to common MHPs. In a review on sickness absence and psychiatric disorders, the lack of research on risk factors in the work environment for sickness absence and disability was stressed as an area that needed further research (Hensing & Wahlstrom, 2004), a point that underlines the relevance of this study. Based on these previous research findings, it is relevant to investigate if job satisfaction may also be associated with work participation in people self-reporting common MHPs as the primary reason for struggling with work functioning. In addition, the lack of knowledge on job satisfaction among people with common MHPs, support the need to investigate the level of job satisfaction in this group of people.

3. AIM OF STUDY AND RESEARCH QUESTION

Work participation has been found to be important in promoting mental health and recovery from mental health problems. Work also has the ability to influence our life satisfaction and overall well-being (Judge & Watanabe, 1993; Sousa-Poza & Sousa-Poza, 2000). Common MHPs account for a large portion of sickness absence episodes and disability in the Norwegian population. Hence, it is important to know more about factors that may influence work participation for people with such complaints. Previous studies have found an association between job satisfaction and mental health as well as job satisfaction and sickness absence and disability. However, few, if any, studies have been done concerning the association between job satisfaction and work participation in people with common MHPs. Such new knowledge could be of importance for the development of interventions aimed at increasing work attendance.

Therefore, the main purpose of this study was to examine if job satisfaction was associated with work participation in a study population of people self-reporting common MHPs as the primary cause of their problems with work functioning. Secondary aim was to describe the level of job satisfaction in a study population with common MHPs. This results in the following research questions.

1. Is job satisfaction associated with work participation in a study population self-reporting to struggle with work participation due to common MHPs?

2. What characterizes job satisfaction levels in a study population self-reporting to struggle with work participation due to common MHPs?

4. METHOD

4.1 Data material

The study is based on data collected through a nationwide research project named "At work and Coping" (Trial registration - NCT01146730). "Centre for Work-Coping" is a vocational rehabilitation service for people with MHPs, provided by NAV. The centres are located in six different counties in Norway. The service is based upon Cognitive Behavioral Therapy (CBT) (Scott, 2001) and Individual Placement and Support (IPS) (Bond, Drake, & Becker, 2012; Burns et al., 2009). "Centre for Work-Coping" is one of many services that NAV provide in an attempt to increase work participation and reduce sick leave and disability pension release. The effect study is designed as a multi-center randomized controlled trial. Its main goal is to evaluate the effectiveness of the model that "Centre for Work-Coping" is based on. Primary outcome of this study is work participation, while secondary outcomes such as changes in mental health also will be evaluated.

Data from questionnaires and NAV-registries are used to evaluate the effect of Centre for Work-Coping. However, this study does not look at effect, but has only used data from the baseline questionnaire, in addition to registry data from NAV to answer the research questions. Baseline questionnaires were handed out and completed at Centre for Work-Coping at the time of inclusion.

4.2 Research design

This study has a cross-sectional, correlational design, appropriate for describing relationships between variables. Cross-sectional designs has the ability to collect large amounts of data through the use of questionnaires, providing the opportunity to explore many different topics through the use of data collected at one single point in time.

4.3 Inclusion and exclusion criteria

Participants eligible for the study were both men and women, eighteen to sixty years of age. Inclusion criteria were problems coping with work due to common MHPs (primarily anxiety and depression) and reasonable closeness to work (willingness to initiate the RTW process within 4-6 weeks). Exclusion criteria were other reasons as primary cause of work problems, such as severe psychiatric disorders, suicide risk, pregnancy, ongoing psychological treatment (individual therapy) and ongoing substance abuse. All NAV-

employees with previous knowledge of Centre for Work-Coping were also excluded. Participants were referred to the centers by case-managers at the local NAV office, General Practitioners (GPs) or they contacted one of the centers on their own initiative. The final sample consists of 1193 participants.

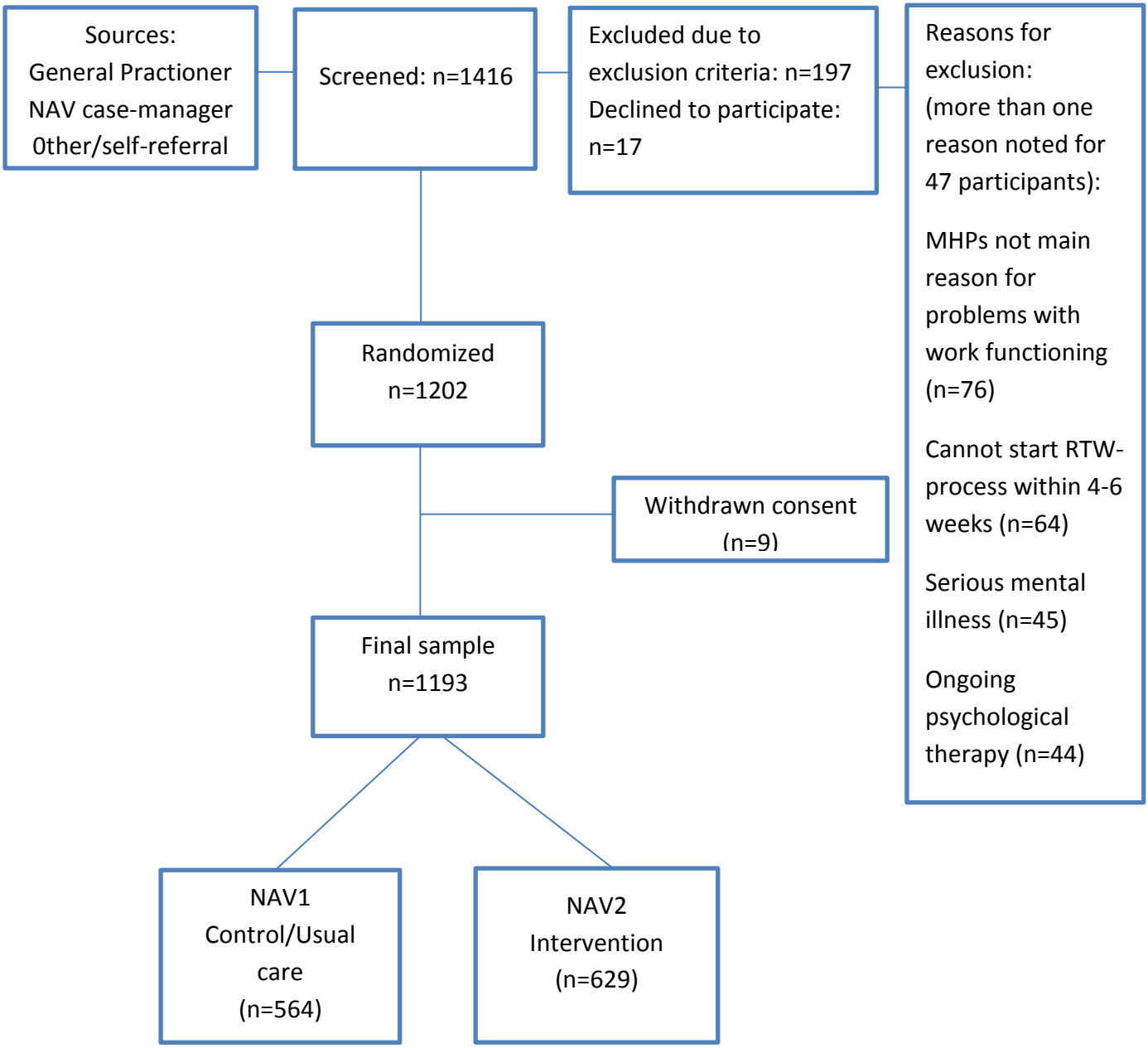

Fig.5 Flowchart showing enrollment

4.4 Instruments and variables

4.4.1 Outcome variable – Work participation

The work participation variable was based on registry data from NAV. Work participation was categorized into "working", "sicklisted" or "receiving disability pension". For the purpose of logistic regression, the three groups were collapsed and dichotomized, which resulted in one "working" group and one "receiving benefits" group.

4.4.2 Job satisfaction - Quality of Employment Survey

Information on job satisfaction was obtained at baseline and was measured with five facet-free items, originally from the *The Quality of Employment Survey* (Quinn & Shepard, 1974), as shown below.

1. *"All in all, how satisfied are you with your job?"*. This item measures overall job satisfaction with responses given on a 5-point Likert scale ranging from "Very dissatisfied" to "Very satisfied" (1-5). The questionnaire also included a sixth category, "Not working", that was omitted for further analyses, as it did not convey anything about the respondents' job satisfaction. Further, the participants' job status was already determined by the use of registry based data from NAV. Such single-item measures of job satisfaction have been found to be acceptable (Scarpello & Campbell, 1983; Wanous, Reichers, & Hudy, 1997) and also appropriate when measuring satisfaction across occupations (Oshagbemi, 1999), as is the case in this study. The remaining four items had three response categories and were included in addition to the first item to broaden and strengthen the measure of job satisfaction.

2. *"If you could choose any job, what would you do?"*. The response categories were "I would prefer a different job than the one I am sicklisted from" (1), "I would not work at all" (2) and "I would want the one I am currently sicklisted from" (3).

3. "With what you know today, would you take the same job again?". The response categories were "I would without a doubt decline" (1), "I would have to think about it" (2) and "I would without a doubt accept" (3).

4. *"Does your job meet the expectations you had when you took it?".* The response categories were "Not much like the expectations I had" (1), "similar to the expectations I had" (2), "Very much like the expectations I had" (3).

5. *"If a good friend of yours was interested in a job similar to the one you currently*

have, with the same employer, what would you recommend your friend to do?". The response categories were "I would advise against it" (1), "I would be hesitant to recommend it" (2) and "I would recommend it" (3).

4.4.3 Confounding

Potential confounding variables were identified through previous research on factors associated with work related ill health and work participation (sickness absence, disability pension).

The Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983) is an instrument measuring self-reported anxiety and depression, designed for people with both somatic and mental health problems. It is a fourteen item scale and all items are scored on a four-point scale. HADS has been found to be a reliable instrument in terms of factor structure, intercorrelations, internal consistency and homogeneity (Mykletun, Stordal, & Dahl, 2001).

The Subjective Health Complaints Inventory (Eriksen et al., 1999) is a scoring system for subjective health complaints. The questionnaire measures self-reported (subjective) complaints irrespective of an existing diagnosis, and refers only to subjective somatic and psychological complaints (Eriksen et al., 1999). It consists of twenty-nine items concerning subjective, somatic and psychological complaints experienced during the last thirty days. The respondents have to rate their complaints from 0-3 (severity), as well as number of days for each complaint. The 29 questions make up five subscales; musculoskeletal pain, pseudoneurology, gastrointestinal problems allergy and flu (Eriksen et al., 1999). The SHC Inventory is a reliable instrument. Internal consistency has been measured, producing a Croncach's alfa of 0.82 for women and 0.75 for men (for all 29 items) (Eriksen et al., 1999).

Characteristics of the work environment such as "Influence on work", "Problems saying no to work tasks", "Bullying at the workplace", "Personal conflicts at work" and "Occupational grade" were also included. Occupational grade was thought to serve as a measure for physical workload, and was dichotomized into either blue or white collar workers. "Influence on work" and "Problems saying no" was included as measures reflecting level of control. "Bullying at the workplace" and "Personal conflicts at work" was included as a control for social support at the workplace.

Demographic variables included age, gender and education.

4.5 Ethical considerations

The "Centre for Work-Coping" project was conducted according to the ethical guidelines provided by the Declaration of Helsinki (World Medical Association, 2008). The declaration stresses the researchers responsibility to maintain the ethical aspects of research and emphasizes in particular the importance of informed consent. All participants in this study were deemed competent to give consent and were given oral and written information about the study at Center for Work-Coping prior to giving their *informed consent (see appendix c)*. All participants were informed that they could at any time withdraw from the study, that participation was *voluntary* and that their *confidentiality* would be maintained. The main study has been approved by the Regional Committee for Medical and Health Research Ethics (REC) (see appendix b). For this study, anonymity was fully maintained. As the study was more concerned with the participants as one entity, answering the research questions did not require identification of any respondents, consequently, the researcher did not have access to identifiable data linking the identification numbers to names.

5. DATA ANALYSES

All analyses were performed using SPSS version 19.0

5.1 Preliminary analyses

The initial statistical procedures performed involved checking the data. No errors were found after checking both categorical and continuous variables. Missing cases were treated by using the "Exclude cases pairwise" option, which only excludes the case/person for the specific analysis performed. Before performing binary logistic regression, the data were checked to make sure that no assumptions were violated. Logistic regression makes assumptions about sample size, multicollinearity and outliers (Pallant, 2010).

Outliers were checked for, however, the 5% trimmed mean and the original mean were practically the same for all the variables, indicating that any "extreme values" in the sample did not have a strong influence on the mean (Pallant, 2010). Furthermore, only one response category had very few cases (the second job satisfaction item only had 17 cases). Logistic regression does not make assumptions about the distribution of scores on the independent variables. However a very uneven split between the dichotomous outcome variable could potentially cause problems. However, Tabachnick and Fidell (2007) suggest

that only variables with an uneven split of 90-10 or more should be deleted. The uneven split of cases between the outcome variable categories was therefore not considered to be of great importance.

5.2 Coding of variables

The outcome variable was dichotomized into "working" and "receiving benefits". The first job satisfaction item ("Overall job satisfaction") was originally scored on a six point scale. Response category one and two were recoded to 1 = Not satisfied. Category three was recoded to 2 = either/or and response category four and five was recoded to 3 = Satisfied.

The remaining four job satisfaction items had three response categories. Similar to all was that the first response category conveyed dissatisfaction, the second uncertainty about feelings related to the job and the third response category translated to satisfaction with the job. Consequently, in relation to job satisfaction, the response categories represent being not satisfied, either/or and satisfied, similar to the "overall job satisfaction" item.

Some of the categories of the categorical variables were collapsed. Responses to the variables "Experience of bullying at work" and "Experience of personal conflicts" were both dichotomized and recoded into yes (have had one or more experiences) or no (never had an experience), according to the definition of bullying and previous research on bullying (Cooper et al., 2004; Einarsen & Skogstad, 1996). One of the response categories on the bullying item had very few samples in one of the categories, so collapsing the categories also made sense in terms of further statistical analyses. Responses for "Influence on work" and "Problems saying no to work tasks" were also dichotomized and recoded into yes and no. Responses for these two variables were originally scored on a six point "likert-type" scale; completely disagree, somewhat disagree, slightly disagree, slightly agree, somewhat agree and completely agree. Because there were no category such as either/or or "do not know", answers were recoded into either yes (agree) or no (disagree).

5.3 Statistical procedures

Reliability tests were done to check the reliability of the scales used**.** For the SHC Inventory and HADS, α=.845 and α=.841 respectively. Hence, both scales were considered reliable (Pallant, 2010).

Correlation analyses was performed to check for multicolinearity. Multicolinearity exists when two or more variables in a regression model are highly correlated (r=.9 and

above) (Pallant, 2010) and would make it difficult to assess the individual importance of each individual variable (Field, 2009). Pearson product-moment correlation coefficient (r) was produced in the correlation analysis.

Crosstabulation was performed in order to look at the distribution and level of job satisfaction. Values generated from the *Chi-square test of independence* was also included in the table.

Binary Logistic regression was chosen as the most appropriate regression technique as it allows the use of a dichotomized outcome variable and multiple independent variables. Logistic regression was first used to assess the individual, bivariate associations between each independent variable and the dependent variable. Bivariate analysis was performed initially to select relevant variables for the final adjusted, multivariable analysis. Those variables who were significantly ($p < 0.05$) associated with the outcome variable in the bivariate analyses were chosen to be included in the final model. The odds ratio (OR) and 95% confidence intervals (CI) were calculated to measure the associations. The threshold for significant associations was set at $p < 0.05$ for all analyses.

6. RESULTS

Descriptive statistics presenting characteristics of the sample are introduced first, followed by results from the correlation analyses performed with the independent variables. Further, results will be introduced according to the relevant research questions.

6.1 Descriptive statistics

Table 1 displays demographic, clinical and work related characteristics of the study population. The mean age was 40.4 years (SD 9.7), ranging from 18 to 59 years. The majority were women, representing 67% of the participants. The majority had completed higher education (university/college level), while the remaining 39,3% reported primary-/high school education levels (< 12 years). Out of the 1193 respondents, the “receiving benefits” group represented 72% of the sample.

Table 1. Characteristics of the study population at baseline (n=1193)

	n	mean	SD	Valid %	Missing
AGE	1192	40.4	9.7		1
GENDER					
Men	393			33.0	
Women	800			67.0	0
EDUCATION					
Primary-/High school	468			39.3	
Higher education	722			60.7	3
EMPLOYMENT STATUS					
Working	334			28.0	
Sicklisted	529			28.0	
Disability pension	330			44.0	0
JOB SATISFACTION					
Item 1: Overall job satisfaction					40
1 Not satisfied				19.3	
2 Either/or				18.0	
3 Satisfied				40.5	
(Not working)				22.2	256
Item 2: Job preferences					223
1 Other than current (Not satisfied)	631			65.1	
2 No job at all	17			1.8	
3 Current (Satisfied)	322			33.2	
Item 3: Regret taking job					146
1 Yes (Not satisfied)	225			21.5	
2 Uncertain	503			48.0	
3 No (Satisfied)	319			30.5	
Item 4: Job expectations					144
1 Not met (Not satisfied)	226			21.5	
2 Uncertain	527			50.2	
3 Met (Satisfied)	296			28.2	
Item 5: Recommend job					142
1 No (Not satisfied)	226			18.0	
2 Uncertain	527			43.3	
3 Yes (Satisfied)	296			38.7	
HOSPITAL ANXIETY AND DEPRESSION SCALE (total score)		18.8	6.9		9
SUBJECTIVE HEALTH COMPLAINTS (total score)		20.6	10.7		4
EXPERIENCED BULLYING AT WORK					11
Yes	430			36.4	
No	752			63.6	
PERSONAL CONFLICTS AT WORK					16
Yes	666				
No	511				
PROBLEMS SAYING NO TO WORK TASKS					39
Yes	934			80.9	
No	220			19.1	
INFLUENCE ON WORK					59
Yes	480				
No	654				
OCCUPATIONAL GRADE					39
White collar	763			66.1	
Blue collar	391			33.9	

Continuous variables are presented with means and standard deviations.
Categorical variables are presented with percentages.

6.2 Correlation analyses

Table 2 presents results from the correlation analyses that was performed in order to check for potential multicolinearity. It shows the strength and direction of the relationships, as well as level of significance. The highest correlation was between the second and third job satisfaction item (r=0.563**). After assessing the values in the table it was concluded that no multicolinearity exists between independent variables. Because most variables were categorical, a correlation analysis with the non-parametric alternative, Spearman Rank Order Correlation (rho) was also performed, to make sure that there were no important differences between rho and r. Only minor differences were observed between the parametric and non-parametric alternative, and they were not considered important in this context.

Table 2. Pearson correlation, n and level of significance between all independent variables

	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Job satisfaction 1-5:															
1.Overall job satisfaction	1153	1	.169**	.220**	.274**	.271**	- .033	- .002	- .077**	- .016	- .075*	- .236**	- .017	- .072*	- .136**
2.Job preferences	970	.169**	1	.563**	.384**	.402**	- .012	- .041	.017	- .007	- .082*	- .170**	.012	- .129**	- .131**
3.Regret taking job	1047	.220**	.563**	1	.414**	.539**	- .015	.029	.033	- .044	- .130**	- .202**	.073*	- .147**	- .170**
4.Job expectations	1049	.274**	.384**	.414**	1	.447**	.037	- .027	.009	- .099*	- .141**	- .184**	- .026	- .189**	- .232**
5.Recommend job	1051	.271**	.402**	.539**	.447**	1	.003	.014	.010	- .081*	- .183**	- .234**	.021	- .244**	- .269**
6.Gender	1193	- .033	- .012	- .015	.037	.003	1	.020	.138**	.130**	- .071*	.032	.094*	.050	- .050
7.Age	1192	- .002	- .041	.029	- .027	.014	.020	1	.027	.014	.017	- .012	.010	.007	.049
8.Education	1190	- .077*	.017	.033	.009	.010	.138**	.027	1	- .094*	- .036	- .035	.032	- .027	.008
9.Subjective Health Complaints	1189	- .016	- .007	- .044	- .099*	- .081*	.130**	.014	- .094*	1	.435**	.161**	.149**	.213**	.192**
10. Anxiety and Depression	1184	- .075*	- .082*	- .130**	- .141**	- .183**	- .071*	.017	- .036	.435**	1	.172**	.182	.147**	.152**
11.Influence on work	1134	- .236**	- .170**	- .202**	- .184**	- .234**	.032	- .012	- .035	.161**	.172**	1	.105**	.116**	.100*
12.Problems saying no	1154	- .017	.012	.073*	- .026	.021	.094*	.010	.032	.149**	.182**	.105**	1	.009	.042
13.Bullying	1182	- .072*	- .129**	- .147**	- .189**	- .244**	.050	.007	- .027	.213**	.147**	.116**	.009	1	.427**
14.Personal conflicts	1177	- .136**	- .131**	- .170**	- .232**	- .269**	- .050	.049	.008	.192**	.152**	.100*	.042	.427**	1

* $p < .05$ (2-tailed)

**$p < .001$ (2-tailed)

6.3 Results according to research questions

6.3.1 Is job satisfaction associated with work participation in a study population self-reporting to struggle with work participation due to common MHPs?

Table 3 shows both crude and adjusted associations. Bivariate analyses (see table 3) was performed to determine the association of each independent variable and "receiving benefits". Education, age, measures on mental health (HADS) and work characteristics such as bullying, personal conflicts, influence on work and problems saying no were not significantly associated with receiving benefits in the bivariate analyses. Being dissatisfied, as measured by the third job satisfaction item ("Regret taking job"), (OR=1.88, CI=1.26-2.81, p=.002), being a woman (OR=1.64, CI=1.26-2.13, p=.000), subjective health complaints (OR=1.02, CI=1.005-1.030, p=.005) and being a blue collar worker (OR=1.38, CI=1.04-1.83, p=.025) were all individually associated with work participation. The remaining job satisfaction items were not significantly associated with benefits.

In the adjusted model (see table 3) only three variables remained significant. Respondents that reported dissatisfaction with work had a higher likelihood (OR=1.78, CI=1.18-2.68, p=.006) of receiving benefits, compared to workers who reported being satisfied with their job. However, not the first job satisfaction item, nor job satisfaction items 2, 4 or 5 showed significant associations, crude or adjusted, with receiving benefits.

Gender was also significant. Women were more likely to be sicklisted or receive disability pension, compared to men (OR=1.73, CI=1.29-2.32, P= .000). Furthermore, blue collar workers were significantly more likely to receive benefits than white collar workers (OR=1.43, CI=1.04-1.95, P=.026). Subjective health complaints failed to contribute significantly to the outcome variable in the adjusted model.

The fully adjusted model was statistically significant, X2 (5, n = 1030) = 31.194, p = < .000, indicating that the model was able to distinguish between those who were working and those who were receiving benefits. The model explained between 3% (Cox and Snell R Square) and 4.3 % (Nagelkerke R Square) of the variance in the outcome variable and correctly classified 73% of cases.

Table 3. Logistic regression showing crude and adjusted associations between independent variables and receiving benefits

Variables	Crude individual associations			Adjusted model		
	OR	(CI)	P	OR	(CI)	p
JOB SATISFACTION						
1.Overall job satisfaction						
Satisfied[1]	1					
Either/or	0.895	(0.627-1.276)	0.538			
Not satisfied	1.123	(0.785-1.608)	0.525			
2.Job preferences						
Current[1] (satisfied)	1					
No job at all	0.231**	(0.085-0.628)	0.004			
Other than current (not satisfied)	1.338	(0.972-1.842)	0.074			
3.Regret taking job						
No[1] (satisfied)	1			1		
Uncertain	1.281	(0.943-1.742)	0.114	1.263	(0.923-1.728)	0.144
Yes (not satisfied)	1.880**	(1.257-2.812)	0.002	1.777**	(1.180-2.675)	0.006
4.Job expectations						
Met[1] (Satisfied)	1					
Uncertain	1.103	(0.803-1.514)	0.545			
Not met (not satisfied)	1.115	(0.756-1.643)	0.584			
5.Recommend job						
Yes[1] (Satisfied)	1					
Uncertain	1.194	(0.886-1.610)	0.245			
No (not satisfied)	1.263	(0.853-1.871)	0.243			
Age	1.000	(0.987-1.013)				
Gender						
Men[1]	1			1		
Women	1.638***	(1.260-2.130)	0.000	1.728***	(1.288-2.320)	0.000
Education						
Higher education[1]	1					
Primary-/High school	1.214	(0.934-1.577)	0.148			
Subjective Health Complaints (SHC Inventory)	1.018**	(1.005-1.030)	0.005	1.011	(0.997-1.025)	0.119
Anxiety and Depression (HADS)	1.012	(.994-1.031)	0.192			
Experienced bullying at work						
Yes[1]	1					
No	0.796	(0.608-1.042)	0.096			
Personal conflicts at work						
Yes[1]	1					
No	0.834	(0.646-1.077)	0.165			
Influence on work						
Yes[1]	1					
No	0.895	(0.687-1.165)	0.408			
Problems saying no to work task						
Yes[1]	1					
No	0.783	(0.570-1.077)	0.133			
Occupational grade						
White collar[1]	1			1		
Blue collar	1.381*	(1.041-1.832)	0.025	1.426*	(1.043-1.948)	0.026

[1] = reference group.

The table shows odds ratios and 95% confidence intervals in brackets.

The table also presents p values and significance levels; * p <0.05, ** p <0.01 and *** p <0.001.

6.3.2 What characterizes job satisfaction levels in a study population self-reporting to struggle with work participation due to common MHPs?

Responses to job satisfaction items 1 to 5 is shown in table 4 and figure 6. In summary, less than half of the respondents reported that they were overall satisfied with their job and the other half of the responses were equally distributed between being not satisfied and either/or (see figure 6). On the second item a majority reported that they would choose a different job than the one they currently had ("Not satisfied"). It also showed that only 1.8% of the respondents reported that they would not want to work at all (responded "either/Or"). The last three items were similar in terms of the distribution of responses on the three categories, with the majority responding "either/or" in terms of job satisfaction. The amount of missing data for the job satisfaction items varied from 3.4% to 18.7%. The first item on overall job satisfaction only had 3.4% missing (not counting those deliberately omitted). Item two had the most missing with 18.7% and the last three variables varied between 11.9% and 12.2% missing.

Table 4 presents levels of job satisfaction according to employment status and Chi-square. Four out of five job satisfaction items were positively related with employment status (working, sicklisted and receiving disability pension). The "overall job satisfaction" item yielded the highest chi square value (159.2) and job expectations yielded the lowest value (3.7). The effect sizes of the four significant correlations are presented by Cramer's V as follows: "Overall job satisfaction", $\chi 2=(6,n=1153)=159.9$, p=.001, Cramer's V=.263. "Job preferences", $\chi 2(4, n=970)=17.2$, p=.002, Cramer's V=.094. "Regret taking job", $\chi 2=(4, n=1047)=13.2$, p=.010, Cramer's V=.079. "Recommend job", $\chi 2=(4, n=1051)=10.6$, p=.032, Cramer's V=.071.

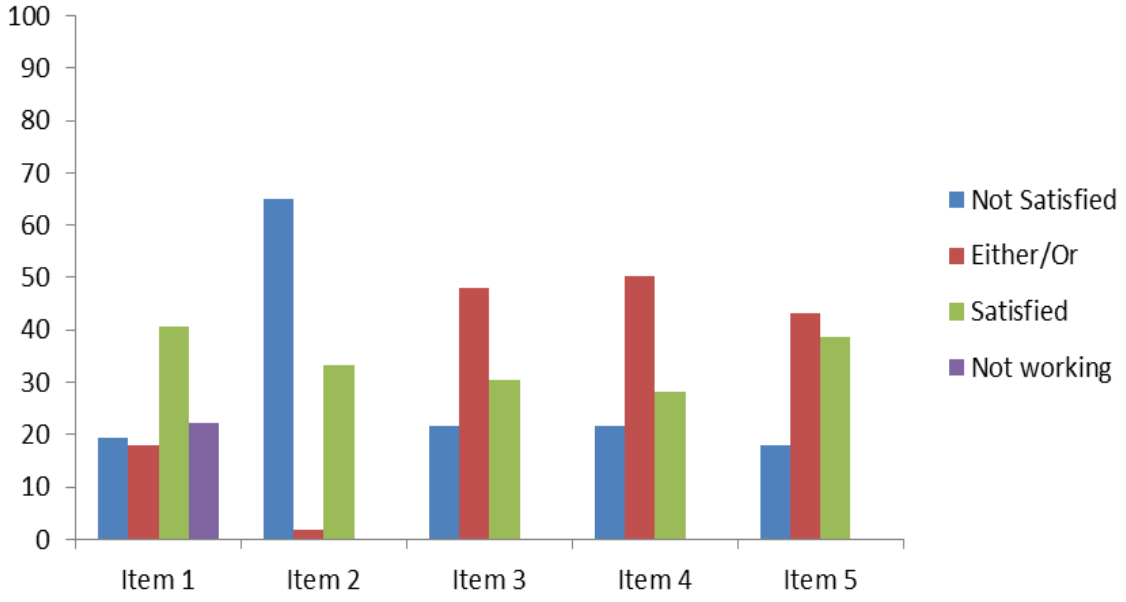

Fig. 6 All responses to job satisfaction items 1 to 5.

Table 4. Crosstabulation of responses on the job satisfaction items according to employment status with Pearson Chi-square

	Working	Sicklisted	Disability Pension	Pearson Chi-Square	df
	%	%	%	χ^2	
Overall job satisfaction				159.9***	6
Not satisfied	18.3	26.3	8.1		
Either/Or	20.2	18.9	14.3		
Satisfied	41.9	44.8	31.6		
Total %[1]	*100*	*100*	*100*		
Job preferences				17.2**[2]	4
Other than current	58.1	66.3	68.4		
No job at all	4.7	0.8	1.2		
Current	37.2	32.9	30.4		
Total %[1]	*100*	*100*	*100*		
Regret taking job				13.2*	4
Yes	16.0	25.0	20.6		
Uncertain	47.9	45.8	52.8		
No	36.2	29.2	20.7		
Total %[1]	*100*	*100*	*100*		
Job expectations				3.7	4
Not met	21.0	23.3	18.6		
Uncertain	49.3	50.8	50.2		
Met	29.7	26.0	31.2		
Total %[1]	*100*	*100*	*100*		
Recommend job				10.6*	4
No	16.5	21.1	13.2		
Uncertain	41.4	44.0	44.0		
Yes	42.1	34.9	42.8		
Total %[1]	*100*	*100*	*100*		

Significance levels: * p <0.05. ** p <0.01. ***p <0.001.
df = degrees of freedom
[1] Total when missing values are included
[2] 2 cells have expected count less than five

7. DISCUSSION

7.1 Summary of main results

The main aim of this study was to investigate a potential association between job satisfaction and work participation in a population self-reporting MHPs as the primary cause of their problems with work functioning. Secondary aim was to describe job satisfaction levels in people with common MHPs.

The statistical model only gave partial support for the association between job satisfaction and work participation. Only one job satisfaction item was found to have a significant association with receiving benefits, that is low job satisfaction was associated with no work participation (being siklisted or receiving disability pension), together with gender and occupational grade. No other variables on work characteristics were significant. The significant results were characterized by moderate associations. However, the model explained little of the total variance in the dependent variable. Average levels of job satisfaction were low in this population.

7.2 Discussion of main results

7.2.1 Is job satisfaction associated with work participation in a study population self-reporting to struggle with work participation due to common MHPs?

Job satisfaction did not show a clear association with being sicklisted or receiving disability pension in this study. The results were somewhat ambiguous, with four of five job satisfaction items failing to give significant associations with the dependent variable. This contrasts previous research findings showing that low job satisfaction is a risk factor for both sickness absence (Hoogendoorn et al., 2002) and disability pension (Krause et al., 1997; Labriola et al., 2009). In a heterogenous sample of workers from different occupations, Roelen, Koopmans, Notenbomer and Groothoff (2008) found that there was a significant association between job satisfaction and the length of the sickness absence, which is in accordance with the study of P. Froom, Melamed, Nativ, Gofer and J.Froom (2001), who found that in people sicklisted due to having a cholecystectomy, low job satisfaction predicted delayed RTW. Job satisfaction has also been found to predict intent to continue working among people with serious mental illness (Tan et al., 1999). Further, Hees, Nieuwenhuijsen, Koeter, Bültmann and Schene (2012) found that for employees with

common MHPs, job satisfaction was an important factor for successful RTW. These findings may be in contrast to the lacking association between four of the job satisfaction items, but they are in accordance with the one significant association found between the third job satisfaction item and receiving benefits. This item also yielded the strongest odds ratio of the three significant variables in the adjusted model.

The association between job satisfaction and work participation found in this study, is in accordance with a large meta-analysis investigating the relationship between job satisfaction and health, which found that job satisfaction was strongly related to MHPs such as anxiety and depression (Faragher et al., 2005). Also in accordance with the meta-analysis, is the finding that job satisfaction was more important to health than other work characteristics. No other work characteristic variables than job satisfaction were significantly associated with being sicklisted or receiving disability pension in this study. These are valid comparisons as parallels can be drawn between the association found between job satisfaction and mental health in the meta-analysis, and the association found between job satisfaction and receiving benefits in people with common MHPs in this study.

Occupational grade produced the second highest odds ratio (see table 3). The occupational grade variable was based on the distinction between white and blue collar workers. Blue collar jobs are primarily characterized by physical demands (Karasek & Theorell, 1990) as well as low control (Karasek & Theorell, 1990). Similar to the findings in other studies (e.g. Marchand, Durand, & Demers, 2005; Tveito et al., 2002) who found that blue collar workers were at higher risk of sick leave than white collar workers, blue collar workers increased the likelihood of receiving benefits (table 3) compared to white collar workers in this study. This finding may also be interpreted as a partial support to the Demand/Control model, which suggests that experiencing lack of control is one important factor leading to undesirable health outcomes (Karasek & Theorell, 1990). However, the intended control variables in this analysis, did not give significant results.

Gender produced the third strongest odds ratio, with women having a higher likelihood of receiving benefits compared to men (see table 3). Our finding that gender is associated with being sicklisted or receiving disability pension in MHPs concurs with other research showing that women are at higher risk of becoming sicklisted (Hensing, Andersson, & Brage, 2006; Koopmans et al., 2010) and receiving disability pension (Alexanderson, Borg, & Hensing, 2005) due to MHPs, and was thus expected.

None of the odds ratio values were high. Faragher (2005) claims that within this context of research, such as job satisfaction and health, correlations (r) rarely exceed 0.3. Values between 0.1 and 0.3 are considered a small correlation according to Pallant (2010). The r value may not be an appropriate comparison with the odds ratio, but the message is that effect sizes vary within different fields of research, and there is no standard "recipe" for what is considered small, moderate or large associations. However, as a guideline, the review on psychosocial risk factors in relation to back pain describe odds ratios >1 and <2 as moderate associations. Therefore, the odds ratios that are presented in this study may be interpreted as moderate. The confidence intervals reported with the odds ratios, gives an estimate of where we can be 95% certain that the true odds ratio lies within in a real population (Pallant, 2010). The confidence intervals in this study are narrow, reflecting high precision of the odds ratio. This is due to a relatively large sample size, and is further a strength in relation to the generalizability of the results.

There may be several possible explanations to why four of the job satisfaction items were not significantly associated with being sicklisted and receiving disability pension in our study. As previously mentioned, the study participants all self-report to have common MHPs and that these common MHPs prevent satisfactory work fuctioning. It is possible that these MHPs have a profound impact on the individuals functioning, even though the symptoms are not considered severe (DSM-IV, 2011). Previous studies have found MHPs to impact on individual's functioning at work, leading to loss of productivity (Kessler, Greenberg, Mickelson, Meneades, & Wang, 2001). The connection between MHPs and occupational dysfunction is somewhat unclear, but fatigue has been shown to be especially prevalent in people with depression (Lerner et al., 2004). The assumption that common MHPs greatly impact work functioning is supported by the increase in sickness absence and disability due to common MHPs (Knudsen et al., 2010; Mykletun & Knudsen, 2009b; NAV, 2012a). Thus, it might be that despite mild or moderate complaints, the common MHPs still have such an impact on functionality that job satisfaction is not an important enough factor in terms of being able to attend work or not. The results given by HADS in the regression model, may seem to contradict this assumption. HADS did not show a significant association with receiving benefits. This is an interesting finding, considering that the participants were included in the study based on self-reporting MHPs as the main reason for problems with work functioning. However, this might be an expression of the complexity of the self-

reported MHPs. The way HADS measures syptoms of anxiety and depression, might not capture what the participants self-report as MHPs.

Furthermore, research on job satisfaction and sickness absence have previously been criticized for tending to neglect the possibility that due to the extent of the health issues, people may not have a choice whether to attend work or not (Einarsen & Skogstad, 2011). If that is the case, it challenges the discussion about whether work is good for everybody. As mentioned in the introduction, being an active participant in the workforce is health promoting for both mental health, and health in general (Waddell & Burton, 2006). For some, however, working may cause more damage than being absent from work. Most people who are unemployed experience a lowered level of psychological well-being, however for a minority, being unemployed improves well-being (Ezzy, 1993). Similarly, re-employment will usually result in restored levels of mental health, but there are some who report lower levels of mental health (Ezzy, 1993). Even though being employed has the ability to fulfill basic human needs such as social contact, time structure and activity (Jahoda, 1981), the fulfillment of these needs depend on the workplace, for example its acceptance of employees with MHPs. Studies have shown that employees with MHPs often feel stigmatized and discriminated against at the workplace because of their disability (Russinova, Griffin, Bloch, & Wewiorski, 2011). Hence, the workplace may not always be a health promoting arena for people with MHPs.

For some people struggling with ill health, the possibility to reduce strain and be absent from work is a necessary and important solution, and in some situations there may be a need for using sickleave as a way of coping with illness or complaints. Kristensen (1991, s. 1) suggests that sickness absence should be viewed as a coping behavior, rather than withdrawal behavior, reflecting an individual's perception of his or her health, and that sickness absence is primarily a consequence of the combination of job demands and coping possibilities in the workplace. This implies that the workplace should be organized in a manner that promotes coping opportunities. Organizing and facilitating work so that it promotes coping opportunities for individuals struggling with MHPs, may lead to healthier workers and further reduce sickness absence. As CATS explains, a positive response outcome expectancy, coping, is associated with low stress levels and general good health (Ursin & Eriksen, 2004). This is also consistent with research on the Demand/Coping Model, which found that subjective health complaints were more related to the combination of demands

(as defined in the Demand/Control model) and coping (as defined by CATS), than demands and control (Eriksen & Ursin, 1999). The reason why coping was a better predictor in the Erisken and Ursin (1999) study was related to the fact that coping takes expectancies into account, which have been developed by learning from previous experiences, as CATS explains. This assumption is supported by the lack of significant associations with the control variables in this study.

Still, work characteristics play an important part in relation to job satisfaction and work participation. Factors in the work environment have been found to contribute significantly to the level of job satisfaction (Tumulty, Jernigan, & Kohut, 1994) and a meta-analysis on job satisfaction and turnover in nurses found that work content and work environment had a stronger relationship with job satisfaction, than variables on individual differences (Irvine & Evans, 1995). Furthermore, job satisfaction has also been found to be a predictor for return to work for people with common MHPs (Hees et al., 2012).

In our study, one job satisfaction item did yield a significant result showing a significant association between job satisfaction and receiving benefits. This is an important finding as this one item contributed more to the likelihood of being sicklisted or receiving benefits than subjective health complaints, which we know to be responsible for a large share of short- and long-term sickness absence (Ihlebæk et al., 2002). This is an interesting discovery in itself and stands in contrast to certain other studies on subjective health complaints and the association with sickness absence and disability (Roelen, Koopmans, & Groothoff, 2010). Subjective health complaints were not significantly associated with receiving benefits, after adjusting for job satisfaction (item three), gender and occupational grade. This is a finding that is in line with the meta-analysis of Faragher (2005), which found that job satisfaction was more strongly associated with MHPs than subjective physical illness (Faragher et al., 2005). Here, this might be an expression of the study population reporting MHPs as the main reason for problems with work functioning. Hence, if MHPs are the main reason for being sicklisted or receiving a disability pension in this population, it might be to such a degree that subjective health complaints are “not important” in comparison. However, this does not mean that there is no comorbidity with subjective health complaints, beacause the scores on subjective health complaints are high within this study population (see table 1). This is in accordance with what other studies (Bair et al., 2003; Henningsen et al., 2003; McWilliams et al., 2004) have found between common MHPs, such as anxiety and

depression, and certain pain and somatic conditions, hence, our finding was therefore not surprising.

The fully adjusted model, despite three significant associations found, only explained between 3% (Cox and Snell R Square) and 4.3 % (Nagelkerke R Square) of the variation in the dependent variable. This is also a finding that needs reflection.

The variables on work characteristics, except from one job satisfaction item, did not yield significant results. This is perhaps an indication of work environment not being the best starting point for investigating associations with work participation for this specific population. In accordance with CATS and the importance of positive response outcome expectancies, having a positive RTW expectancy has been found to be associated with work participation in common MHPs (Løvvik, Øverland, Hysing, Broadbent, & Reme, 2013; Nielsen et al., 2010). Further, subjective health complaints have been found to be more dependent on the combinations of demands and coping than demands and control (Eriksen & Ursin, 1999). Hence, it might be that the individual characteristics are more strongly associated with work participation in people with common MHPs. However, that does not mean that the characteristics of the work environment are not important, because the individual response outcome expectancies may be influenced by the work environment, such as control (decision latitude), much like level of job satisfaction is impacted by both environmental and individual factors.

Health, as defined by WHO is more than just the absence of disease. Beyond that, it is about physical, mental and social well-being (WHO, 1946). The close interrelationship between job satisfaction/worklife, life satisfaction and wellbeing suggests that factors outside of the workcontext may influence job satisfaction and level of work participation. Judge and Watanabe (1993) has found life satisfaction and job satisfaction to be reciprocally related, both having the ability to influence each other. Factors such as family and social life, surrounding contexts of the individual other than work, may then be assumed to influence job satisfaction levels, health and ultimately work participation. A 2007 study found that both work stressors (conceptualized as job strain) and non-work stressors, such as caring responsibilities, poor non-work social support, debt and poor housing quality were all associated with common mental disorders (Clark et al., 2012). The balance of family and work is also a determinant of job satisfaction (Mueller & McCloskey, 1990) and found to be a factor related to RTW for people with MHPs (Vries, Koeter, Nabitz, Hees, & Schene, 2012).

This is in accordance with the health promotion perspective, which promotes that achieving health requires a wide approach, based on the definition of health given by WHO. Dahlgren and Whitehead (1991) claim that there are a number of factors that determine our health, such as individual life style factors, social and community networks. Some of these factors are included in the model, such as gender, age and education. However factors such as balance of family and work have not been included. It is possible that if they had been included, the model would have accounted for more of the variance in the outcome variable. It may also be possible that the reciprocal relationship between job satisfaction and life satisfaction is of particular importance in people with MHPs.

As an additional explanation for the poorly explained variance in the outcome, there are some factors that have been found to be important in relation to sickness absence for people with common MHPs, that we were not able to incorporate in this study. Based on previous research, social support should have perhaps been heavier included in the analyses. Support from superiors (Foss et al., 2010) and general co-worker support at the workplace (Andersen et al., 2012) have both been found to be important for RTW for people with MHPs. Bearing in mind the challenge of stigmatization and prejudice that people with MHPs might be subjected to in the workplace (Russinova et al., 2011; Vornholt, Uitdewilligen, & Nijhuis, 2013) it might be prudent to investigate that aspect closer. Social support is also an important part of the expanded Demand/Control model, and Karasek and Theorell (1990) defines social support as "…overall levels of helpful social interaction available on the job from both co-workers and supervisors" (p.69). Further, Karasek and Theorell (1990) suggest that social support at the workplace "can facilitate active coping patterns" (p.69). Social support is also a determinant of job satisfaction. Because job satisfaction and coping are both related to positive health outcomes and work participation, social support is a very important factor.

The RTW process is complex, and dependent on many factors to be successful. Hence, the aim of increased labor participation amongst those who have an illness or are disabled in any way can perhaps only be reached through a broad focus on all determinants involved. Based on the findings of this study, job satisfaction may have the ability to contribute as one factor in this multifactorial process.

7.2.2 What characterizes job satisfaction levels in a study population self-reporting to struggle with work participation due to common MHPs?

The highest percentage of satisfied workers obtained was 40.5%, measured by the first item on job satisfaction, «All in all, how satisfied are you with your job?". The lowest percentage of satisfied workers was observed by the fourth job satisfaction item, "Does your job meet the expectations you had when you took it?", showing that only 28.2 % were satisfied with their job. Compared to other research, reporting levels of job satisfaction to around 50-60% (Aiken et al., 2001; Choi, Cheung, & Pang, 2013) the job satisfaction levels in this study were quite low. A study by Svensen, Arnetz, Ursin and Eriksen (2007) reported that as much as 68% of their study participants were satisfied with their jobs. However, these studies did not include participants with common MHPs, but rather on populations in specific occupations or with different health complaints than MHPs. It is conceivable that level of job satisfaction differs across different populations and occupations (Roelen, Koopmans, Notenbomer, et al., 2008) so comparisons are done with caution. Possible explanations for the low levels of job satisfaction will be discussed in more detail further on.

The level of job dissatisfaction found in this study is in line with previous research findings on the relationship between affectivity and job satisfaction, which is particularly relevant for this study, as the participants of the study self-report symptoms in line with affective and neurotic disorders such as depression and anxiety. Job satisfaction can be defined not only by work environment characteristics, but also by individual factors. Connolly and Viswesvaran (2000) found that both negative affectivity (NA) and positive affectivity (PA) were related to job satisfaction. PA may be defined as high energy, enthusiasm and pleasurable engagement, while distress, unpleasurable engagement and nervousness characterizes NA (Watson, Clark, & Tellegen, 1988). The characteristics of NA also apply to descriptions of depression and anxiety, it is therefore possible that in a sample population characterized as having mild or moderate MHPs such as depression, affectivity may have influenced job satisfaction responses in the direction of reporting more dissatisfaction. It is further more likely to be attributed to the individual than the workplace in this case, because the study population represent a variety of different occupations and workplaces.

Measures of overall job satisfaction such as «All in all, how satisfied are you with your job?", refer to the emotions of the respondents. This opens up for the possibility of

individual characteristics such as affectivity and mood influencing the responses. According to Einarsen and Skogstad (2011), 80-85% will respond that they are satisfied regardless of their actual working conditions when asked about job satisfaction in this way (Einarsen & Skogstad, 2011). This is in accordance with Oshagbemi (1999), who found that this type of single-item measure overestimates the percentage of people who are satisfied with their jobs and underestimates those who are dissatisfied. This leads to the assumption that those who responded "either/or" were underestimated as well, and are in fact more dissatisfied than what was reported. This would imply an average level of job satisfaction even lower than what it appears to be, challenging the credibility of the highest average of job satisfaction found in this study. This might have lead to an underestimation of the association between job satisfaction and work participation.

Contrary to what some researchers have found, Moyle (1995) did not find that NA causes the individual to perceive all aspects of their environment negatively, but found that for the prediction of job satisfaction, NA was found to be mediated through perception of the work environment, such as control at work. This is in accordance with the Demand/Control model, which highlights the importance of control, suggesting that experiencing lack of decision latitude/control, in combination with high demands, can cause psychological strain, leading to adverse health outcomes such as anxiety and depression (Karasek & Theorell, 1990). This is also consistent with previous research findings that job satisfaction is more related to level of control than with physical or behavioral measures of strain (Ganster, 1989 and Sauter, 1989, referred to in Moyle, 1995, p. 652). Nevertheless, two variables were included as a measure of control, but both failed to produce a significant individual association with receiving benefits. For the prediction of subjective health complaints the demand/coping model have been found to be a better predictor than demand/control. Considering the amount of comorbidity between subjective health complaints and MHPs, and previous research on control and coping, it is possible that coping is an important factor for this study population also. Connolly and Viswesvaran (2000) found that 10-25% of the variance in job satisfaction was due to individual differences in affectivity. Further, a 2002 study found that 10% of the employees were responsible for 82% of the sickness absence. The 10%-group scored lower on certain personal characteristics such as their lifestyle, complaints, reported more job stress, less control and scored lower on coping, than the 90-% group (Tveito et al., 2002). However, it must be emphasized that the latter

study was not done on people with common MHPs, but it does support the perception that coping abilities are important in the work-health relationship.

Although there is evidence from research, as noted above, that individual characteristics can influence job satisfaction, there has also been some criticism of this notion. A meta-analyses from 2001 concluded that "it is more likely that dispositions indirectly affect job satisfaction via selection and self-selection processes" (Dormann & Zapf, 2001, p. 498). This means that personality traits affect which job you get which will in turn affect working conditions and the working conditions ultimately affect job satisfaction. This statement is a parallel to the reccurring issue of causal pathways between work and health and determinants of job satisfaction. However, the notion of personality traits affecting what job you get, might be of specific importance in people with common MHPs. Research showing that there is prejudice and discrimination towards employees with disabilities (Vornholt et al., 2013) strengthens this assumption.

Job dissatisfaction can be associated with negative response outcome expectancies and increased risk of illness (Svensen et al., 2007). Therefore, organizing work so that it promotes job satisfaction, may lead to workers having a positive work experience, which can lead to positive response outcome expectancies consistent with coping and reduced health risk. Positive work experiences have been found to be an important factor for RTW in people with MHPs such as depression (Vries et al., 2012).

The low job satisfaction levels in this study, show that there is a potential for increasing level of job satisfaction for people with common MHPs. Since job satisfaction is associated with sickness absence and receiving disability pension, that may be important in relation to work participation. Identifying employees who are dissatisfied, and supporting them, could possibly help prevent the dissatisfaction to further lead to sickness absence.

The Chi square test for independence show that the participants responded differently on job satisfaction according to whether they were working, sicklisted or receiving disability pension (see table 4), which was expected. Consequently, possible, factors, other than chance, must be considered as contributors to this difference. Although the Chi-square test does not give information on how these differences are distributed, crosstabulation (see table 4) shows that there were differences in the frequency of the job satisfaction levels according to employment status. There were also great differences in the size of $\chi 2$, where "Overall job satisfaction" produced the highest value, indicating a large

difference between the expected value (if there were no differences) and observed value. The highest differences, hence the largest Chi-square value was observed for "overall job satisfaction". Because of the difference in Chi-square value, the strength of the association (Cramer's V) also differed accordingly (Pallant, 2010).

Previous studies on sickness absence have mostly focused on either participants that were sicklisted, or those receiving disability pension. The outcome variable in this study, however, is comprised of both and is therefore a very heterogenous group. It includes people with a varying degree of work participation and many different occupations. Findings from the Chi-square test and the methods presented in previous research indicate that it might have been more appropriate to look at those sicklisted and those receiving disability pension separately.

7.2.3 Empowerment in the workplace

Facilitating adaptions in the workplace to the individual capabilities and needs of the worker, enabling full use of each worker's resources, is required by law (Arbeidstilsynet, 2005). This facilitation is also emphasized in *the Ottawa Charter for Health Promotion* (WHO, 1986) and *The Lillestrøm Declaration on workplace Health Promotion* (Statens arbeidsmiljøinstitutt, 2002), as important factors of health promotion in the workplace. It is possible to see a clear connection between empowerment, an important part of the health promotion perspective, and the foundation of both the Demand/Control model and CATS.

One way of empowering peoples' social resources, could be to focuse on organizing the workplace in a way that enhance the workers level of control. Further, social support can facilitate coping opportunities in the workplace (Karasek & Theorell, 1990). Both increased levels of control and the facilitation of coping opportunities would contribute to empowering employees and would, according to both theories, encourage healthy workers. Whether the focus is on the organization or the individual, the aim is the same, which is that the workplace should promote organizational learning and the development of positive response outcome expectancies (coping) (Eriksen & Ursin, 2004). Over the years, workplace health promotion has evolved from being constricted to a risk-factor approach, focused mainly on individual behavior changes, to a more holistic, integrative approach to promoting health in the workplace (Chu, Driscoll, & Dwyer, 1997).

The findings of this study point in the direction of individual characteristics being an

important factor in explaining level of work participation in people with common MHPs. This is merely an assumption, based on the fact that the majority of the work characteristic variables did not contribute significantly, and the small explained variance. Providing additional support for this assumption is that workplace interventions aimed at sustained RTW have been found to be most successful when they adapt a holistic approach, focusing on both the individual and the individuals' environment (Dekkers-Sanchez, Wind, Sluiter, & Hw Frings-Dresen, 2011), and as *The Ottawa Charter* highlights, to reach a state of complete physical, mental and social well-being, the individual must be able to cope with the environment (WHO, 1986, p. 1). Mark and Smith (2011) found that both workplace characteristics and individual characteristics were important to both job satisfaction and mental health. Specifically, work demands and negative coping were associated with high levels of anxiety, depression and low job satisfaction. Factors such as rewards, social support, job control and positive coping were associated with lower levels of anxiety and depression and high job satisfaction (Mark & Smith, 2011). This gives further support to the theory of adopting a broad approach to interventions aimed at reducing mental ill health and increasing work participation.

7.3 Methodological considerations: Strengths and limitations

7.3.1 The design

In a cross-sectional study, the data are collected at a fixed point in time, which precludes causal conclusions (only baseline data has been used) (Polit & Beck, 2012). The problem of temporal ambiguity is important to consider, because the direction of the relationship between job satisfaction and work participation cannot be determined based on a cross-sectional study. It is therefore beyond the scope of this paper to look at the causal pathways between job satisfaction, mental health and work participation. This thesis is merely focused on describing the relationship. However, causality is an interesting topic that frequently appears in the literature concerning job satisfaction (Sousa-Poza & Sousa-Poza, 2000) and work and mental health (de Lange, Taris, Kompier, Houtman, & Bongers, 2005). For instance, does satisfied workers find their jobs interesting or does interesting jobs increase job satisfaction? Do depressed people view their jobs more negatively because they are depressed? Or do people with MHPs such as depression end up in more unsatisfying work environments because of their illness? Studies have found that work characteristics

and mental health influence each other reciprocally (de Lange et al., 2005; de Lange, Taris, Kompier, Houtman, & Bongers, 2004; Dormann & Zapf, 2001). However, the theoretical framework provided by the Demand/Control model and CATS, postulate a probable causal direction for the associations between job satisfaction, MHPs and work related behavior such as sickness absence. Further deLange et al (2004) claim that the causal direction the Demand/Control model assumes seem to be the most prominent and "normal" pathway (de Lange et al., 2004).

The cross-sectional design of this study allows for the possibility of not including factors that explain the outcome variable well enough. The statistical model in this study does not contain an exhaustive list of possible explanatory variables and confounders related to work participation, consequently there will be residual confounding.

Correlational studies are often at risk of selection bias (Polit & Beck, 2012). This happens when the sample "select themselves", so that certain characterisics are overrepresented because they are related to the nature of those that choose to participate in the study. The participants were referred to the centres through multiple paths; on their own initiative, through their GP or local NAV office. This might limit the chance of selection bias affecting the study. However, participation does require the respondents to act and seek help. Consequently, one cannot completely preclude the possibility of selection-bias.

A major strength of the study is the heterogeneity of the study population, as they are representative of the whole working population, which should reduce the chance of any systematic bias being introduced in the study. Furthermore, the respondents were geographically spread over six different counties in Norway, and the sample is relatively large. These are both study strengths that increases the possibility of the results corresponding with the actual target population. However, level of significance is a reflection of sample size. With large samples such as this one, significant results are more easily obtained than with small samples, and must be interpreted with caution.

Another strength of the study is that the outcome variable is based on registry data from NAV. Although registry data may also include errors, register data are thought to be highly reliable, excluding the disadvantages of systematic bias that may occur in self-reports, such as recall-bias (Coughlin, 1990) and social desirability response bias (Polit & Beck, 2012). This contributes positively to the validity of the study.

7.3.2 Measurements

All independent variables are based on self-reported information from the questionnaire; demographic variables, health measures such as subjective health complaints (SHC Inventory), anxiety and depression (HADS) and the characteristics of work. One of the strongest characteristics of the self-report method is that it is efficient and that it yields information that would be impossible to obtain by any other method, having the ability to capture psychological characteristics through direct communication with the respondents (Polit & Beck, 2012). However, there are some disadvantages. The most serious issue concerns the validity of self-reports and response bias. Can we be certain that people respond the way they actually feel and behave? For example, in regard to job satisfaction, Oshagbemi (1999), suggests that some workers have defensive reactions to questions about job satisfaction. Some might feel that their dissatisfaction at work is their own fault because they chose the wrong job, hence they might feel that reporting dissatisfaction reflects bad decisionmaking on their part. Others tend to rationalize any problems they have at work, consequently demanding less of their job. This is especially relevant if the worker is unwilling to change jobs, and may result in the worker falsely reporting satisfaction. These are examples of how participants' lack of candor can introduce social desirability bias in the study and how self-reports can potentially harm the validity of the study. However, the questions in this study are not considered very direct or unsensitive, which might encourage frank responses, as might the assurance of confidentiality given at Centre for Work-Coping. Self-reported data are widely used within psychological research and studies have shown good correlation between, for instance, self-reported sickness absence and register data (Burdorf, Post, & Bruggeling, 1996) and between self-reported general and mental health and the effect on labor force participation (Leroux, Rizzo, & Sickles, 2012).

Single-item measures of job satisfaction such as "All in all, how satisfied are you with your job?" have been found to be acceptable (Scarpello & Campbell, 1983; Wanous et al., 1997) and have even compared favourably to multiple-item scales in some cases (Nagy, 2002). It has been argued that because of individual differences, the multiple item scales may neglect some aspects of the job that are important to an employee's job satisfaction, whereas a single-item measure allows for individual differences (Nagy, 2002; Scarpello & Campbell, 1983). The main criticism of single-item measures is that internal consistency cannot be estimated, and they are therefore assumed to have lower reliability than

multiple-item scales. In an attempt to compensate for the potential weakness of the overall single-item measure on job satisfaction (item 1), another four job satisfaction items were included. This addition strengthens the study by broadening the measures of job satisfaction beyond a single-item measure. All five questions originate from *The Quality of Employment Survey* (Quinn & Shepard, 1974), however little is known about the reliability and validity of the latter four items as a measure of job satisfaction. The five job satisfaction items are similar in that they do not refer to facet-specific work characteristics. However, only item one is a validated job satisfaction item, and since item 3 was the only significant contributor to the outcome variable, conclusions about the importance of job satisfaction is hard to make on this basis. The use of a different measure, such as a facet-specific job satisfaction scale could perhaps have yielded different results.

Other single-item questions such as influence on work, problems saying no to work tasks, personal conflicts and experiences of bullying, are susceptible to the same criticism as mentioned above. In addition, the single-item variables on work characteristics convey information about psychosocial work characteristics that serve as a substitute for other constructs such as work load, control and social support at the workplace. However, these variables have not been validated for this purpose and are therefore not fully reliable measures for the concepts that they intend to measure. Validated scales measuring constructs such as co-worker support, decision latitude and demands would be preferable. For instance, the variables intended as measures of social support (conflicts at work and bullying) did not contribute significantly in the statistical model. However, this might be related to the nature of the questions. Both variables were quite negatively worded, including words like “bullying” and “conflicts”. Perhaps, questions on more general social support at the workplace would yield different results. Questions worded in a more discrete manner would also be less vulnerable to bias such as social desirability.

7.3.3 Collapsing categories

The variables in this study are mostly categorical, with the exception of the SHC Inventory and HADS. Collapsing some of the categories simplifies the presentation of data, and was in some cases necessary. Since part of the research question was to look at differences in the association between people who are not satisfied and satisfied, and receiving benefits, recoding the variables so that the categories represented levels of

satisfaction was necessary. This involved collapsing the categories of the first job satisfaction item. Categories of other variables that were collapsed, were based on previous research, definitions, and case distributions, as mentioned in the method section of this thesis. The negative side of collapsing categories is that some individual differences of the sample might disappear. However, the benefits of collapsing categories were considered greater than the disadvantages in this case.

7.3.4 Missing data

Missing data is one of the most prevalent issues within data analysis (Tabachnick & Fidell, 2007). In this study, there was a fair amount of missing data on some of the the job satisfaction items. The missing data was examined through a crosstabulation to see if there were any of the three employment gropus "working", "sicklisted" and "receiving disability pension" who were responsible for a majority of the missing data. The initial thought was that those receiving a disability pension, thus having no relationhip with a job, could find the questions on job satisfaction irrelevant, thus choosing not to respond. The second item had 18.7% missing data, the largest amount of missing (not counting those purposely omitted on item 1). This is probably due to the wording of the response categories. The question is "If you could choose any job, what would you do?" and the responses are "I would prefer a different job than the one I am currently sicklisted from", "I would not work at all" and "I would want the job I am currently sicklisted from". The question speaks directly to those sicklisted, and it is then logically concistent that most of those sicklisted responded, and that the missing is spread among those actively working and receiving disability pensions. The last three job satisfaction items had similar amounts and distribution of missing data, varying between 11,9% and 12,2%. In summary, those sicklisted were most consistent in responding to the job satisfaction items, and the missing was mostly equally spread among the working grroup and those receiving disability pension. This is considered a consequence of the wording of the items as well as the assessed relevance of the questions according to employment status. Further, the missing data is assumed not to have an important impact on the study.

8. CONCLUSION AND IMPLICATIONS FOR FUTURE RESEARCH

The association between job satisfaction and work participation was inconclusive. The one significant finding between job satisfaction and receiving benefits, suggests that job satisfaction might have an impact on work participation. However, the model which included several characteristics of the work environmemnt, explained little of the variance in work participation, which leads to the assumption that exploring the importance of individual characteristics may be a better starting point to explain factors that are involved in work participation in this specific population. Including the individual in any workplace intervention would also be a way of empowering those struggling with work functioning and contribute to a health promoting workplace. The results of this study indicate, as has been found previously, that there are many factors that may be involved in work participation for people who are disabled, and that interventions at the workplace should be focused on both environmental and individual factors. Furthermore, the participants reported low job satisfaction levels. This finding indicates a potential for increasing job satisfaction levels for people with common MHPs, which could further have an impact on health and work participation.

Further research is warranted to determine whether job satisfaction is an important factor in relation to work participation for this group of people. The importance of both the working environment and individual factors in relation to work participation should be further explored, as conclusions about these relationships cannot be made based on the analyses performed in this study alone. The use of validated items and scales to measure constructs like demands, decision latitude and social support should be included, as well as the inclusion of measures on individual characteristics such as coping and RTW expectancies.

For measuring job satisfaction in people with MHPs it might also be prudent to use instruments that limit the interference of personal feelings and moods in the response (to the extent that this is possible). One solution might be the use of facet-specific questions, rather than measures of overall job satisfaction. Future research should focus on investigating determinants of job satisfaction for people with common MHPs specifically, which could give valuable information on which work characteristcs to target when attempting to increase job satisfaction levels. In order to make causal inferences, a longitudinal study on the relationship between job satisfaction, mental health and work participation in people with common MHPs would be recommended.

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ID. NR:

Spørreskjema om arbeid & helse

Forskningsprosjektet "Senter for jobbmestring"

Hensikten med dette forskningsprosjektet er å få bedre kunnskap om hva som kan hjelpe folk med lettere psykiske lidelser til å delta i arbeidslivet. Prosjektet er finansiert av Nasjonal strategiplan for arbeid og psykisk helse drives på oppdrag fra NAV av Uni helse og Universitetet i Bergen. Ansvarlig for prosjektet er forskningsleder og professor Stein Atle Lie.

For å avgjøre om tilbudet ved Senter for jobbemestring virker, er det nødvendig å spørre ganske grundig om hvordan du har det nå før oppfølgingen igangsettes. Vi ber deg bl.a. svare på spørsmål om mental helse, helseplager, utdanning, arbeidsevne og funksjon. Du vil bli bedt om å fylle ut et mindre spørreskjema om 6 og 12 måneder.

Det er mange spørsmål i skjemaet. Det er ingen riktige eller gale svar. Les spørsmålene nøye og forsøk å beskrive det som passer best for deg. Bruk mageføIelsen og svar det som umiddelbart virker som det riktige svaret for deg. Noen spørsmål ligner på hverandre. Årsaken til dette er at spørreskjemaet er sammensatt av flere standardiserte spørreskjema som brukes i forskning internasjonalt og ikke kan endres på. Det er derfor viktig at du besvarer alle spørsmålene.

Det utfylte skjemaet er konfidensielt. Resultatene vil ikke bli presentert på en måte som gjør det mulig å identifisere den enkelte svargiver. Alle som er knyttet til prosjektet har taushetsplikt.

Dersom du har spørsmål om prosjektet, ta kontakt med oss.

På forhånd tusen takk for hjelpen!

Stein Atle Lie
Prosjektleder
Uni helse/Universitetet i Bergen
Christies gate 13
5015 Bergen

Prosjektmedarbeidere Uni helse/Universitetet i Bergen

Camilla M.S. Løvvik Simon N. Øverland Silje E. Reme

1. **Kjønn**
   ❑1 Mann ❑2 Kvinne

2. **Fødselsår:** 19_____

3. **Har du lese og skrivevansker?**
   ❑1 Ja
   ❑2 Nei

   Si fra dersom du ønsker hjelp til å fylle ut skjema.

4. **Sivilstand**
   ❑1 Ugift ❑3 Samboer ❑5 Skilt
   ❑2 Gift/partnerskap ❑4 Enke-/enkemann ❑6 Separert

5. **a) Hvor mange barn har du?** _____
   b) Hvor mange barn bor hos deg nå/er i husholdningen?
   Antall 0-3 år: _____ 4-7 år: _____ 8-16 år: _____ over 16 år: _____

6. **Ditt fødeland:** _____
   Mors fødeland_____
   Fars fødeland_____

7. **Hva slags utdanning har du?** *(Sett kryss ved den høyeste utdannelsen du har)*
   ❑1 Grunnskolenivå (Barne- og ungdomsskole)
   ❑2 Videregående skole
   ❑3 Universitet/høgskole 1-4 år
   ❑4 Universitet/høgskole mer enn 4 år
   ❑5 Annet

8. **YRKE**

a) **Hva er/var ditt hovedyrke:** _____
   antall år i yrket_____ **stillingsprosent**:_____ %

b) **Type bedrift:** _____

c) Har du privat uføreforsikring ❑1 Ja ❑2 Nei

9. Sett et kryss ved det utsagnet som passer best for deg:

❑1 Jeg er arbeidsledig
❑2 Jeg er i jobb
❑3 Jeg kommer til å komme tilbake i jobb, men jeg vet ikke når
❑4 Jeg har planlagt å komme tilbake i jobb om …… uker
❑5 Jeg har ingen planer om å komme tilbake til jobb

d) Dersom du er sykmeldt, hva er da de <u>viktigste</u> årsakene til at du er sykmeldt (årsakene rangeres dersom det er flere enn én årsak)?

❑1 Er ikke sykmeldt
❑2 Psykiske plager
❑3 Arbeidskonflikt
❑4 Andre helseplager
❑5 Belastninger i hjemmesituasjonen
❑6 Annet _____

BEHANDLING

10. Hvor lenge har du hatt psykiske plager? Antall år……

a) Har du tidligere fått behandling for dine psykiske plager? (Hvis ja, oppgi årstall)

❑0 Nei
❑1 Ja, behandling hos psykolog År: _____
❑2 Ja, annen samtalebehandling År: _____
❑3 Ja, medikamentell behandling År: _____
❑4 Ja, alternativ behandling ikke nevnt ovenfor År: _____

b) Hvilken effekt synes du denne behandlingen hadde på dine psykiske plager?

❑1 Jeg ble bedre
❑2 Ingen effekt
❑3 Jeg ble verre

11. Jobbsikkerhet

a) Har du et arbeid å gå tilbake til nå?

❑$_1$Ja ❑$_2$ Nei

b) Hvis nei, hvor gode muligheter tror du at det er for å få arbeid etter endt behandling?

❑$_1$ Svært gode
❑$_2$ Meget gode
❑$_3$ Gode
❑$_4$ Mindre gode
❑$_5$ Dårlige

12. Har du vært utsatt for mobbing på jobb(gjelder både nåværende/forrige arbeidsplass og tidligere arbeidsplasser)?

❑$_1$Aldri ❑$_2$ En sjelden gang ❑$_3$ Av og til
❑$_4$ 1 gang i uken ❑$_5$ Flere ganger i uken

13. Har du vært involvert i personkonflikt på jobb (gjelder både nåværende/forrige arbeidsplass og tidligere arbeidsplasser)?

❑$_1$Aldri ❑$_2$ Ved én enkelt anledning
❑$_3$ Ved mer enn én anledning ❑$_4$ Ved flere anledninger

14. JOBBTILFREDSHET

a) Alt i alt, hvor tilfreds er du med jobben din?

❑$_1$Svært misfornøyd ❑$_3$ Verken misfornøyd eller fornøyd ❑$_5$ Svært fornøyd
❑$_2$ Misfornøyd ❑$_4$ Fornøyd ❑$_6$ Er ikke i jobb

b) Hvis du kunne velge å gå inn i hvilken som helst jobb, hva ville du velge?

❑$_1$ Ville foretrekke en annen jobb enn den jeg nå er sykmeldt fra.
❑$_2$ Ville ikke jobbe i det hele tatt.
❑$_3$ Ville ønske den jobben jeg nå er sykmeldt fra.

c) Med det du vet i dag, ville du tatt den jobben du nå har?

❑$_1$Jeg ville uten tvil takke nei.
❑$_2$ Jeg ville tenke meg om to ganger.
❑$_3$ Jeg ville uten å nøle ta den samme jobben.

d) Svarer jobben din til forventningene du hadde da du tok den?

❑$_1$ Ikke særlig lik forventningene.
❑$_2$ Litt lik forventningene.
❑$_3$ Svært lik forventningene.

e) Hvis en god venn av deg var interessert i å ta en jobb tilsvarende jobben du nå har for samme arbeidsgiver, hva ville du råde ham eller henne til?

❑$_1$ Jeg ville fraråde min venn det.
❑$_2$ Jeg ville vært i tvil om å anbefale det.
❑$_3$ Jeg ville anbefale det på stedet.

15. EGENVURDERINGER

a) Hvis du fortsetter i arbeid, hvilken effekt vil det ha på dine plager?

❑$_1$ Forverre tilstanden
❑$_2$ Forsinke helbredelsen
❑$_3$ Ikke noen effekt
❑$_4$ Litt gunstig effekt
❑$_5$ Svært gunstig effekt

b) Ta standpunkt til følgende utsagn

(Sett ring rundt tallet)	Helt uenig	Nokså uenig	Litt uenig	Litt enig	Nokså enig	Helt enig
Jeg har ikke muligheter til å påvirke min egen arbeidssituasjon.	1	2	3	4	5	6
Jeg har problemer med å si nei til oppgaver enten hjemme eller på arbeid.	1	2	3	4	5	6

b) Ta standpunkt til denne påstanden

(Sett kryss)	Passer svært godt	Passer godt	Passer verken godt eller dårlig	Passer dårlig	Passer svært dårlig
Jeg regner med å være tilbake på jobb i løpet av noen uker					

15. Har du på noe tidspunkt vært påført vold av en eller flere andre personer?
(Uhell og vanlige barneslagsmål regnes ikke med)

❑1 Ja ❑2 Nei

a) I tilfelle vold, hva slags vold har du vært utsatt for?

❑1 Blitt slått ❑3 Seksuell vold eller overgrep
❑2 Ran/Overfall ❑4 Frihetsberøvelse ❑5 Alvorlige trusler

b) I tilfelle du har vært utsatt for vold, hvor ofte har dette skjedd?

❑1 En enkelt hendelse ❑3 Regelmessig i 1 – 12 måneder
❑2 En eller flere enkelthendelser ❑4 Regelmessig i over ett år

LIVSSTIL

14. Fysisk form

a) Hvordan vil du beskrive din fysiske form?

❑1 Meget god ❑3 Middels
❑2 God ❑4 Dårlig ❑5 Meget dårlig

b) Er din fysiske form dårligere enn vanlig?

❑1 Ja ❑2 Nei

15. Hvor ofte røyker du?

❑1 Ikke i det hele tatt
❑2 Sjeldnere enn en gang i uken
❑3 Hver uke
❑4 Hver dag

Hvis du røyker hver dag, hvor mange sigaretter røyker du vanligvis per dag? (Både ferdigsigaretter og hjemmerullede)
Antall _____

Hvis du røyker hver uke, hvor mange sigaretter røyker du vanligvis per uke? (Både ferdigsigaretter og hjemmerullede)
Antall _____

16. Hvor ofte bruker du snus?

- ❑ 1 Ikke i det hele tatt
- ❑ 2 Sjeldnere enn en gang i uken
- ❑ 3 Hver uke
- ❑ 4 Hver dag

Hvis du bruker snus, omtrent hvor mange bokser snus bruker du per uke?
Antall _____

17. Omtrent hvor ofte har du i løpet av det siste året drukket alkohol?

- ❑ 1 Har aldri drukket alkohol
- ❑ 2 Har ikke drukket alkohol siste år
- ❑ 3 Noen få ganger siste år
- ❑ 4 Ca 1 gang i mnd
- ❑ 5 2-3 ganger per mnd
- ❑ 6 Ca 1 gang i uken
- ❑ 7 2-3 ganger i uken
- ❑ 8 4-7 ganger i uken

Når du drikker alkohol, hvor mange glass og/eller drinker drikker du vanligvis?

Antall_____

Omtrent hvor mange ganger i løpet av det siste året, har du drukket så mye som minst 5 glass og/eller drinker i løpet av ett døgn?

Antall_____

Når du drikker, drikker du da vanligvis (sett ett eller flere kryss)

- ❑ Øl
- ❑ Vin
- ❑ Brennevin

18. Søvn

a) Hvordan har du sovet de tre siste månedene?

- ❑ 1 Meget godt
- ❑ 2 Godt
- ❑ 3 Middels
- ❑ 4 Dårlig
- ❑ 5 Meget dårlig

b) Hvor mange timer sover du vanligvis <u>per døgn</u>? Ca. _____timer

c) Hvor mange timer søvn trenger du per døgn (hvor mange timer ville du sove hvis du hadde muligheten til å sove så lenge som du trengte)? Fyll ut:

Jeg trenger _____ timer og _____ minutter søvn per døgn

c) Trenger du hvile i løpet av dagen (hvor mange timer ville du hvile hvis du hadde muligheten til å hvile så mye som du trengte)? Fyll ut:

Jeg trenger _____ timer og _____ minutter hvile i tillegg til søvn per døgn

19. Hvordan vil du beskrive din egen helse?

❑1 Meget god ❑3 Middels
❑2 God ❑4 Dårlig ❑5 Meget dårlig

20. Medikamenter

a) Bruker du medisiner?

❑1 Ja, daglig
❑2 Ja, ved behov

Hvilke medisiner bruker du? _____

21. Helseproblemer siste 30 døgn

På den neste siden nevnes noen vanlige helseplager. Vi vil be deg om å vurdere hvert enkelt problem/symptom, og oppgi **i hvilken grad du har vært plaget** av dette i løpet av de siste tretti døgn, og **antall dager** du har vært plaget.

Eksempel
Hvis du føler at du har vært *endel* plaget med forkjølelse/influensa siste måned, og varigheten av plagene var *ca. en uke*, fylles dette ut på følgende måte:
Sett ring rundt tallet som passer best.

Nedenfor nevnes noen alminnelige helseproblemer	Ikke plaget	Litt plaget	Endel plaget	Alvorlig plaget	Antall dager plagene varte (omtrent)
1. Forkjølelse, influensa	0	1	(2)	3	7

NB! Det er viktig at du fyller ut både *hvor plaget* du har vært, og *omtrent antall dager* du har vært plaget siste tretti døgn.

SHC (Eriksen et al., 1999)

Nedenfor nevnes noen alminnelige helseproblemer (sett ring rundt tallet som passer)		**Ikke plaget**	**Litt plaget**	**Endel plaget**	**Alvorlig plaget**	**Antall dager plagene varte (omtrent)**
1.	Forkjølelse, influensa.....	0	1	2	3	.....
2.	Hoste, bronkitt.....	0	1	2	3	.....
3.	Astma	0	1	2	3	.....
4.	Hodepine	0	1	2	3	.....
5.	Nakkesmerter	0	1	2	3	.....
6.	Smerter øverst i ryggen	0	1	2	3	.....
7.	Smerter i korsrygg	0	1	2	3	.....
8.	Smerter i armer.....	0	1	2	3	.....
9.	Smerter i skuldre	0	1	2	3	.....
10.	Migrene.....	0	1	2	3	.....
11.	Hjertebank, ekstraslag.....	0	1	2	3	.....
12.	Brystsmerter	0	1	2	3	.....
13.	Pustevansker	0	1	2	3	.....
14.	Smerter i føttene ved anstrengelser	0	1	2	3	.....
15.	Sure oppstøt, "halsbrann».....	0	1	2	3	.....
16.	Sug eller svie i magen	0	1	2	3	.....
17.	Magekatarr, magesår	0	1	2	3	.....
18.	Mageknip	0	1	2	3	.....
19.	«Luftplager».....	0	1	2	3	.....
20.	Løs avføring, diaré	0	1	2	3	.....
21.	Forstoppelse	0	1	2	3	.....
22.	Eksem	0	1	2	3	.....
23.	Allergi	0	1	2	3	.....
24.	Hetetokter	0	1	2	3	.....
25.	Søvnproblemer	0	1	2	3	.....
26.	Tretthet.....	0	1	2	3	.....
27.	Svimmelhet	0	1	2	3	.....
28.	Angst	0	1	2	3	.....
29.	Nedtrykt, depresjon.....	0	1	2	3	.....

22. Mestring av problemer og utfordringer

Nedenfor finner du eksempler på utsagn som beskriver hvilke muligheter man har når man møter problemer og utfordringer i hverdagen. Vennligst sett kryss i ruten som passer best for deg. Det finnes ingen riktige eller gale svar.

		Stemmer helt	Stemmer ganske bra	Stemmer ikke særlig bra	Stemmer ikke i det hele tatt
1.	**De aller fleste vanskelige situasjoner klarer jeg å løse med et bra resultat**	1	2	3	4
2.	**De viktigste sakene i livet mitt har jeg egentlig ingen kontroll over**	1	2	3	4
3.	**Jeg skulle ønske at jeg kunne forandre livssituasjonen min, men det går ikke**	1	2	3	4
4.	**Alle mine forsøk på å forandre min livssituasjon er meningsløse**	1	2	3	4
5.	**Det er bedre at andre forsøker å løse problemene enn at jeg skal rote det til og gjøre det verre**	1	2	3	4
6.	**Jeg ville nok hatt det bedre hvis jeg ikke hadde strevd sånn med å løse problemene mine**	1	2	3	4
7.	**Alle mine forsøk på å gjøre ting bedre gjør det egentlig bare verre**	1	2	3	4

TomCats 7.

23. Sosial støtte

Har du i løpet av de siste 14 dagene snakket med:	1. Ja	2. Nei
a) Noen i familien om gleder og sorger?		
b) Noen i familien om helsespørsmål?		
c) Andre, utenom familien om gleder og sorger?		
d) Andre, utenom familien om helsespørsmål?		

24. Vi vil gjerne vite om du har følt deg sliten, svak eller i mangel av overskudd den siste måneden. Vennligst besvar ALLE spørsmålene ved å krysse av for det svaret du synes passer best for deg. Vi ønsker at du besvarer alle spørsmålene selv om du ikke har hatt slike problemer. Vi spør om hvordan du har følt deg i det siste og ikke om hvordan du følte deg for lenge siden. Hvis du har følt deg sliten lenge, ber vi om at du sammenligner deg med hvordan du følte deg sist du var bra.

(Sett ett kryss på hver linje)

Har du problemer med at du føler deg sliten?	❑ Mindre enn vanlig	❑ Ikke mer enn vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Trenger du mer hvile?	❑ Nei, mindre enn vanlig	❑ Ikke mer enn vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Føler du deg søvnig eller døsig?	❑ Mindre enn vanlig	❑ Ikke mer enn vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Har du problemer med å komme igang med ting?	❑ Mindre enn vanlig	❑ Ikke mer enn vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Mangler du overskudd?	❑ Ikke i det hele tatt	❑ Ikke mer enn vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Har du redusert styrke i musklene dine?	❑ Ikke i det hele tatt	❑ Ikke mer enn vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Føler du deg svak?	❑ Mindre enn vanlig	❑ Som vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Har du vansker med å konsentrere deg?	❑ Mindre enn vanlig	❑ Som vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Forsnakker du deg i samtaler?	❑ Mindre enn vanlig	❑ Ikke mer enn vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Er det vanskeligere å finne det rette ordet?	❑ Mindre enn vanlig	❑ Ikke mer enn vanlig	❑ Mer enn vanlig	❑ Mye mer enn vanlig
Hvordan er hukommelsen din?	❑ Bedre enn vanlig	❑ Ikke verre enn vanlig	❑ Verre enn vanlig	❑ Mye verre enn vanlig

25. Vær vennlig å besvare hvert spørsmål med å sette en ring rundt «ja» eller «nei». Det er ingen riktige eller gale svar, og det er ingen «lure-spørsmål». Arbeid raskt med spørsmålene, og bruk ikke for lang tid på å tenke på den eksakte meningen med spørsmålene. Vennligst besvar alle spørsmålene.

1	Går humøret ditt ofte opp og ned?	Ja	Nei
2	Føler du deg «helt elendig» uten grunn?	Ja	Nei
3	Har du lett for å bli irritert?	Ja	Nei
4	Blir følelsene dine lett såret?	Ja	Nei
5	Har du ofte følelsen av å «ha fått nok»?	Ja	Nei
6	Vil du beskrive deg selv som en nervøs person?	Ja	Nei
7	Er du en bekymret person? . .	Ja	Nei
8	Ville du beskrive deg som anspent eller overnervøs?	Ja	Nei
9	Bekymrer du deg for lenge etter en pinlig opplevelse?	Ja	Nei
10	Plages du av «nervene»?	Ja	Nei
11	Føler du deg ofte ensom?	Ja	Nei
12	Er du ofte bekymret over å ha skyldfø1else?	Ja	Nei

EPQ-N

26. **Sykdomsforståelse**

Vennligst sett en ring rundt det tallet som best samsvarer med din mening om de følgende spørsmålene.

Hvor mye påvirker sykdommen livet ditt?

0	1	2	3	4	5	6	7	8	9	10
Ingen påvirkning										Voldsom påvirkning

Hvor lenge tror du at sykdommen din vil vare?

0	1	2	3	4	5	6	7	8	9	10
Svært kort tid										For alltid

Hvor mye kontroll føler du at du har over sykdommen din?

0	1	2	3	4	5	6	7	8	9	10
Absolutt ingen kontroll										Svært stor kontroll

Hvor mye mener du at behandlingen din kan hjelpe mot sykdommen din?

0	1	2	3	4	5	6	7	8	9	10
Ikke i det hele tatt										Svært hjelpsom

Hvor mye opplever du symptomer fra sykdommen din?

0	1	2	3	4	5	6	7	8	9	10
Ingen symptomer i det hele tatt		alvorlige								Mange symptomer

Hvor bekymret er du angående sykdommen din?

0	1	2	3	4	5	6	7	8	9	10
Ikke bekymret i det hele tatt										Svært bekymret

Hvor godt føler du at du forstår sykdommen din?

0	1	2	3	4	5	6	7	8	9	10
Forstår ikke i det hele tatt										Forstår svært godt

Hvor mye påvirker sykdommen din deg følelsesmessig? (dvs gjør den deg sint, redd, urolig eller deprimert?)

0	1	2	3	4	5	6	7	8	9	10
Ikke påvirket følelsesmessig i det hele tatt										Svært påvirket følelsesmessig

Vennligst skriv ned i rekkefølge de tre viktigste faktorene som du tror forårsaket sykdommen din.

De aller viktigste årsaker for meg:

1. _____
2. _____
3. _____

27. HAD

Disse spørsmålene handler om hvordan du føler deg for tiden. Kryss av det svaret som best beskriver dine følelser **siste uken**. Funder ikke for lenge på ditt svar; din umiddelbare reaksjon på hvert spørsmål er sannsynligvis riktigere enn et svar du har fundert lenge på.

1	Jeg er nervøs eller anspent		2	Det føles som om alt går langsommere	
	For det meste	❑1		Nesten hele tiden	❑1
	Ofte	❑2		Svært ofte	❑2
	Noen ganger	❑3		Fra tid til annen	❑3
	Ikke i det hele tatt	❑4		Ikke i det hele tatt	❑4
3	Jeg gleder meg fremdeles over ting jeg pleide å glede meg over		4	Jeg føler meg urolig liksom jeg har sommerfugler i magen	
	Avgjort like mye	❑1		Ikke i det hele tatt	❑1
	Ikke fullt så mye	❑2		Fra tid til annen	❑2
	Bare lite grann	❑3		Ganske ofte	❑3
	Ikke i det hele	❑4		Svært ofte	❑4
5	Jeg har en urofølelse som om noe forferdelig kommer til å skje		6	Jeg har sluttet å bry meg om hvordan jeg ser ut	
	Helt sikkert og svært ille	❑1		Ja, helt klart	❑1
	Ja, men ikke så veldig ille	❑2		Jeg bryr meg ikke så mye som jeg burde	❑2
	Litt ille, men det bekymrer meg ikke så mye	❑3		Det kan nok hende jeg ikke bryr meg nok	❑3
	Ikke i det hele tatt	❑4		Jeg bryr meg om utseende like mye som jeg alltid har gjort	❑4
7	Jeg kan le og se det morsomme i situasjoner		8	Jeg føler meg rastløs som om jeg stadig må være i aktivitet	
	Like mye som jeg alltid har gjort	❑1		Uten tvil svært mye	❑1
	Ikke like mye nå som før	❑2		Ganske mye	❑2
	Avgjort ikke så mye nå som før	❑3		ikke så veldig mye	❑3
	Ikke i det hele tatt	❑4		Ikke i det hele tatt	❑4

9	Jeg har hodet fullt av bekymringer		10	Jeg kan se framover med glede	
	Veldig ofte	❑1		Like mye som jeg alltid har gjort	❑1
	Ganske ofte	❑2		Heller mindre enn jeg pleier	❑2
	Av og til	❑3		Avgjort mindre enn jeg pleier	❑3
	En gang i blant	❑4		Nesten ikke i det hele tatt	❑4
11	Jeg er i godt humør		12	Jeg kan plutselig få en følelse av panikk	
	Aldri	❑1		Uten tvil svært ofte	❑1
	Noen ganger	❑2		Svært ofte	❑2
	Ganske ofte	❑3		Ikke så veldig ofte	❑3
	For det meste	❑4		Ikke i det hele tatt	❑4
13	Jeg kan sitte i fred og ro og kjenne meg avslappet		14	Jeg kan glede meg over en god bok eller et radio eller TV-program	
	Ja, helt klart	❑1		Ofte	❑1
	Vanligvis	❑2		Fra tid til annen	❑2
	Ikke så ofte	❑3		Ikke så ofte	❑3
	Ikke i det hele tatt	❑4		Svært sjeldent	❑4

(Snaith et al., 1982; Herman, 1997)

28. Helsetilstand

Vis hvilke utsagn som passer best på din helsetilstand i dag ved å sette et kryss i en av rutene utenfor hver av gruppene nedenfor.

Vanlige gjøremål *(f.eks. arbeid, studier, husarbeid, familie- eller fritidsaktiviteter).*

Jeg har ingen problemer med å utføre mine vanlige gjøremål ❑1
Jeg har litt problemer med å utføre mine vanlige gjøremål ❑2
Jeg er ute av stand til å utføre mine vanlige gjøremål. ❑3

Smerte/ubehag

Jeg har verken smerte eller ubehag. ❑1
Jeg har moderat smerte eller ubehag. ❑2
Jeg har sterk smerte eller ubehag. ❑3

Angst/depresjon

Jeg er verken engstelig eller deprimert. ❑1
Jeg er noe engstelig eller deprimert. ❑2
Jeg er svært engstelig eller deprimert. ❑3

Gange

Jeg har ingen problemer med å gå omkring. ❑1
Jeg har litt problemer med å gå omkring. ❑2
Jeg er sengeliggende. ❑3

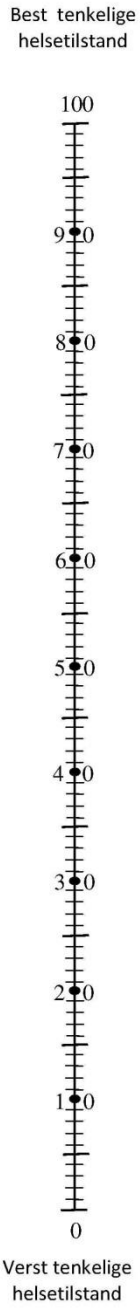
Personlig stell

Jeg har ingen problemer med personlig stell. ❑1
Jeg har litt problemer med å vaske meg eller kle meg. ❑2
Jeg er ute av stand til å vaske meg eller kle meg. ❑3

29.

For å hjelpe folk til å si hvor god eller dårlig en helsetilstand er, har vi laget en skala (omtrent som et termometer) hvor den beste tilstanden du kan tenke deg er merket 100 og den verste tilstanden du kan tenke deg er merket 0.

Vi vil gjerne at du viser på denne skalaen hvor god eller dårlig helsetilstanden din er i dag, etter din oppfatning. Vær vennlig å gjøre dette ved å trekke en linje fra boksen nedenfor til det punktet på skalaen som viser hvor god eller dårlig din helsetilstand er i dag.



EQ-5D

Tusen takk for hjelpen!

Appendix b

UNIVERSITETET I BERGEN
Regional komité for medisinsk og helsefaglig forskningsetikk, Vest-Norge (REK Vest)

Stein Atle Lie
stein.lie@uni.no
Uni helse

Deres ref	Vår ref	Dato
	2010/1130	03.05.2010

Ad. prosjekt: Effektevaluering av Senter for jobbmestring

Det vises til søknad om godkjenning av forskningsprosjekt, datert 06.04.2010.

REK Vest behandlet søknaden i møtet den 22.04.2010.

Senter for jobbmestring er et tiltak i regi av NAV som retter seg mot personer som er sykemeldt pga angst/depresjon. Tiltaket består av symptomreduserende veiledning basert på kognitiv metodikk og tilrettelegging av arbeid. Formålet med prosjektet er å evaluere effekten av Senter for jobbmestring, målt i deltakernes arbeidsdeltakelse og endringer i psykisk helse. Deltakerne vil bli randomisert til tiltaket eller til ordinær oppfølging av NAV/fastlege for sammenligning. Spørreskjema, registerdata og kvalitative intervjuer vil bli benyttet.

Forskningsansvarlig for prosjektet er Uni Research. REK Vest forutsetter at dette vedtaket blir forelagt den forskningsansvarlige til orientering. Se helseforskningsloven § 6, jfr. § 4 bokstav e.

Komiteen mener at dette er et nyttig prosjekt med en god design. Søknaden er velformulert. En har ingen merknader til protokoll.

Man ønsker å koble sammen opplysninger fra en rekke registre. REK Vest setter som vilkår at navnene på alle registrene må fremgå av forespørselen.

Komiteen har ingen merknader til den skisserte planen for oppbevaring og sletting av data.

Vedtak:
Prosjektet godkjennes på betingelse av at ovennevnte vilkår tas til følge.

Sluttmelding skal sendes inn på eget skjema senest et halvt år etter prosjektslutt.

Vennlig hilsen

Jon Lekven
leder

Øystein Svindland
rådgiver

(Brevet er godkjent for elektronisk utsending uten signatur)

Kopi: Forskningsansvarlig Uni Research (helse@uni.no)
Prosjektmedarbeider Camilla Løvvik (camilla.lovvik@psych.uib.no)

Ny ordning fra 01.07.09:
En gjør oppmerksom på at denne søknaden er vurdert i henhold til helseforskningsloven, som ble satt i kraft 01.07.09. Dette innebærer at REK fra og med denne dato har kompetanse til å godkjenne opprettelse og endring av forskningsbiobank, å innvilge dispensasjon fra taushetsplikt og å gi tillatelse til bruk av personopplysninger til forskning. Saker som er søkt Helsedirektoratet, NSD eller Datatilsynet vedrørende ovennevnte, vil utelukkende bli behandlet av REK. Dette for å unngå parallellbehandling av saker nå i overgangsfasen.

De regionale komiteene for medisinsk og helsefaglig forskningsetikk foretar sin forskningsetiske vurdering med hjemmel i helseforskningsloven § 10, jfr. forskningsetikkloven § 4.
Saksbehandlingen følger forvaltningsloven. Komiteenes vedtak etter forskningsetikklovens § 4 kan påklages (jfr. forvaltningsloven § 28) til Den nasjonale forskningsetiske komité for medisin og helsefag. Klagen skal sendes REK Vest (jfr. forvaltningsloven § 32). Klagefristen er tre uker fra den dagen du mottar dette brevet (jfr. forvaltningsloven § 29).

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telefon +47 55 58 32 68 **telefaks** +47 55 58 98 78
web uni.no/helse **epost** helse@uni.no
organisasjonsnummer 985 827 117 mva

Forespørsel om deltakelse i forskningsprosjektet "Senter for Jobbmestring"

Bakgrunn og hensikt
Hensikten med dette forskningsprosjektet er å få bedre kunnskaper om hva som kan hjelpe folk med lettere psykiske lidelser som står utenfor arbeid, er sykmeldt eller i fare for å falle ut av arbeidslivet. Prosjektet er finansiert av Nasjonal strategiplan for arbeid og psykisk helse og drives på oppdrag fra NAV av Uni helse og Universitetet i Bergen. Ansvarlig for prosjektet er forskningsleder og professor Stein Atle Lie.

Hva innebærer studien?
Dersom du velger å delta i forskningsprosjektet, vil du innledningsvis bli invitert til en vurderingssamtale ved Senter for jobbmestring. I tillegg vil du der bli bedt om å svare på spørsmål om bl.a. psykisk helse, helseplager, og arbeidsevne. Når dette er gjort, vil du bli tilfeldig trukket til en av to grupper: den ene gruppen får tilbud om ordinær oppfølging ved det lokale NAV kontor (evt. fastlege) ("NAV 1"), mens den andre gruppen vil få oppfølging ved Senter for jobbmestring ("NAV 2"). Fordelingen er helt tilfeldig og det er ingen, hverken du selv eller noen du møter i prosjektet, som kan påvirke eller som på forhånd vet utfallet av trekningen.

Mulige fordeler og ulemper
Deltakelse i prosjektet omfatter ingen risiko for din helse. Du har når som helst mulighet til å trekke deg fra prosjektet, og kan igjen henvende deg til NAV og andre uavhengig av din deltakelse. Etter at inklusjonsperioden for forskningsprosjektet er avsluttet, gjelder dette også Senter for jobbmestring.

Hva skjer med informasjonen om deg?
Informasjonen som registreres om deg skal kun brukes slik som beskrevet i hensikten med studien. Alle opplysningene og prøvene vil bli behandlet uten navn og fødselsnummer eller andre direkte gjenkjennende opplysninger. En nummerkode knytter deg til dine opplysninger gjennom en navneliste. Listen som knytter navn til nummerkode oppbevares i låsbart brannsikkert skap. Det er kun autorisert personell knyttet til prosjektet som har adgang til navnelisten og som kan finne tilbake til deg, og alle personer som er knyttet til prosjektet (for eksempel saksbehandler ved NAV, ansatte ved Senter for jobbmestring, forskere, teknisk personale og kontorpersonale) har taushetsplikt.

Informasjonen du har gitt oss vil bli sammenstilt med informasjon fra offentlige registre, og vi ber deg derfor om tillatelse til å hente informasjon om tiltak og tjenester du mottar fra NAV, sykmeldinger og andre trygdeytelser fra NAV og FD-trygd ved Statistisk sentralbyrå. Dette ønsker vi blant annet for å vurdere om tilbudet du får har effekt på arbeidslivsdeltakelse og psykisk helse.

Ved prosjektslutt innen utgangen av 2015 blir datamaterialet anonymisert ved at verken direkte eller indirekte personidentifiserbare opplysninger fremgår, og navneliste og koblingsnøkler vil slettes. Anonymiseringen innebærer videre at spørreskjema makuleres. Det vil ikke være mulig å identifisere deg i resultatene av studien når disse publiseres.

Frivillig deltakelse
Det er frivillig å delta i studien. Du kan når som helst og uten å oppgi noen grunn trekke ditt samtykke til å delta i studien. Dette vil ikke få konsekvenser for den vanlige oppfølgingen du får av NAV eller din fastlege. Dersom du trekker deg fra prosjektet, har du rett til å få helseopplysninger som er samlet inn fra deg, og at disse slettes fra prosjektet. Krav om dette må fremsettes før data er analysert. Dersom du ønsker å delta, undertegner du samtykkeerklæringen på siste side. Om du nå sier ja til å delta, kan du senere trekke tilbake ditt samtykke uten at det påvirker din øvrige oppfølging. Dersom du senere ønsker å trekke deg eller har spørsmål til studien, kan du kontakte prosjektleder Stein Atle Lie (55 58 99 61).

Ytterligere informasjon om studien finnes i kapittel *A* – *utdypende forklaring av hva studien innebærer.*

Ytterligere informasjon om personvern og forsikring finnes i kapittel B – *Personvern, økonomi og forsikring.*

Samtykkeerklæring følger etter kapittel B

Kapittel A- utdypende forklaring av hva studien innebærer

Deltakere rekrutteres til studien ved Senter for jobbmestring etter vurderingssamtale og orientering om forskningsprosjektet ved det aktuelle senteret. Deretter vil deltakere bli tilfeldig trukket til en av to grupper: den ene gruppen vil få tilbud om ordinær oppfølging ved det lokale NAV kontor/fastlege ("NAV 1"), mens den andre gruppen får tilbud om videre oppfølging ved Senter for jobbmestring ("NAV 2"). Fordelingen er helt tilfeldig.

NAV 1 – Ordinær oppfølging fra NAV eller fastlege
NAV og det lokale helsevesen har en rekke tilbud for folk som synes det er vanskelig å fungere i jobb på grunn av psykiske lidelser. Dersom deltakere trekkes til denne gruppen, vil vi tilby å sende et brev til det lokale NAV kontor/fastlege for oppfølging i tråd med ordinær praksis der. Det vil også bli gitt informasjon om enkelte selvhjelpsressurser for mestring av angst og depresjon.

NAV 2 - Senter for Jobbmestring
Oppfølging ved Senter for jobbmestring innebærer såkalt symptommestrende veiledning. Dette vil si veiledning av en person i hvordan håndtere og mestre symptomer på lettere psykiske lidelser i en arbeidsmessig kontekst. Ved Senter for jobbmestring jobber det fagpersoner med kompetanse innen arbeid og psykisk helse. Veiledningen som blir gitt legger vekt på å gi den enkelte bruker økt forståelse av sine plager sett i forhold til fungering på arbeidsplassen. Ved behov vil man også få tilbud om bistand fra en jobbkonsulent i forhold til å skaffe arbeid eller hjelp til å tilrettelegge arbeidsplassen.

Prosjektet vil innrullere brukere fram til utgangen av 2011. Som deltager i prosjektet vil du bli bedt om å fylle ut spørreskjema ved innrullering, samt 6 og 12 måneder etterpå. Det er hverken fordeler eller ulemper ved å delta i prosjektet, og det innebærer ingen kostnad for deg som person å delta på prosjektet.

Kapittel B - Personvern, økonomi og forsikring

Personvern

Opplysninger som registreres om deg er basert på de spørreskjema du selv velger å fylle ut. Slik vil du selv kunne velge hvilken informasjon om deg som blir tilgjengelig for forskerne i prosjektet. Videre vil prosjektet innhente opplysninger fra databasen FD-trygd ved Statistisk sentralbyrå. Registeropplysninger om trygdeytelser, sosialhjelp og inntekt vil bli samlet inn fra NAVs registre om utbetaling av sykepenger, avklaringspenger og uførepensjon, fra NAVs register om pensjonsgivende inntekt, fra NAVs arbeidssøkerregister, fra sosialhjelpsregisteret og fra inntektsregisteret. FD-trygd inneholder først og fremst informasjon fra NAV om hvilke ytelser (sykepenger, attføring og uføretrygd) du eventuelt mottar i løpet av prosjektets oppfølgingsperiode. FD-trygd inneholder også informasjon om utdanningsnivå. For ytterligere informasjon se FD-trygd sine internettsider (http://www.ssb.no/mikrodata/datasamling/fdtrygd) ved statistisk sentralbyrå (http://ssb.no). For å kunne være sikker på at den informasjonen du gir ved å besvare spørreskjema blir koblet til riktig informasjon fra registerdata og senere spørreundersøkelser (og ved kobling mot FD-trygd) vil ditt personnummer (11 siffer) benyttes. Det er kun dette personnummeret vil benyttes til. Personnummeret blir slettet når datasamlingen er sluttført og dataene skal analyseres. Kobling av informasjon tilbake til deg blir altså ikke blir mulig for prosjektets medarbeidere.

Uni helse ved prosjektleder og professor Stein Atle Lie er databehandlingsansvarlig.

Rett til innsyn og sletting av opplysninger om deg og sletting av prøver

Hvis du sier ja til å delta i studien, har du rett til å få innsyn i hvilke opplysninger som er registrert om deg. Du har videre rett til å få korrigert eventuelle feil i de opplysningene vi har registrert. Dersom du trekker deg fra studien, kan du kreve å få slettet innsamlede opplysninger, med mindre opplysningene allerede er inngått i analyser eller brukt i vitenskapelige publikasjoner.

Økonomi og NAVs rolle

Studien er finansiert gjennom forskningsmidler fra Nasjonal Strategiplan for arbeid og psykisk helse på oppdrag fra Helse- og omsorgsdepartementet og Arbeidsdepartementet. Senter for Jobbmestring er ett av en lang rekke tiltak i regi av NAV. Dette prosjektet har som hovedfokus å undersøke om, og i så fall hvilken, effekt Senter for jobbmestring har for målgruppen. Det er i NAVs interesse, både som sponsor for prosjektet og som eier av tiltaket Senter for jobbmestring, å undersøke effekten av tiltaket. Prosjektet drives og ledes fra Uni helse. Uni helse er en uavhengig og selvstendig aktør i forhold til NAV.

Forsikring

Senter for Jobbmestring er ett av flere tiltak i regi av NAV. Personer som ikke blir henvist til Senter for Jobbmestring vil likevel få en oppfølging som til enhver tid følger det gjeldende regelverk og oppfyller det man har krav på av oppfølging fra NAV. Vi regner ikke at dette prosjektet innebærer noen risiko for de personene som deltar.

Informasjon om utfallet av studien

Du har til enhver tid rett til å trekke deg fra deltakelse i studien. Videre kan du til enhver tid be om informasjon om utfallet av studien. Informasjon om utfall av studien vil ikke kunne identifisere enkeltpersoner, men vil kun vise hovedtendenser basert på generelle kjennetegn, slik som kjønn, alder og informasjon basert på de innsamlede data.

Samtykke til deltakelse i studien

Jeg er villig til å delta i studien

(Signert av prosjektdeltaker, dato)

Jeg bekrefter å ha gitt informasjon om studien

(Signert, rolle i studien, dato)