



PhD thesis

Yun Ladegaard

Work-related mental disorders

**A quantitative and qualitative investigation of employees and managers
experiences at the workplace and in the Workers' Compensation System**

Supervisor: Paul Maurice Conway, Janne Skakon, Bo Netterstrøm and Annie Høgh

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Indhold

LIST OF ORIGINAL PAPERS	3
THANK YOU	4
DANSK RESUMÉ.....	5
ENGLISH SUMMARY	7
INTRODUCTION	10
1. BACKGROUND - WORK-RELATED MENTAL DISORDERS	12
1.1. Definition of work-related mental disorders.....	12
1.2. Extent and Costs.....	13
2.3. WRMD in the Workplace and WCS.....	13
2.4. A. WRMD in the Workplace	15
2.5. B. WRMD in the WCS	16
2.6. C. Interaction between the Workplace and WCS	18
3. AIM OF THIS THESIS	22
4. MATERIALS AND METHODS.....	23
4.1. Study I.....	23
4.2. Data collection for Study II and Study III.....	27
4.3. Study II.....	33
4.4. Study III	34
4.5 Study IV	35
5. RESULTS	38
5.1. Study I.....	38
5.2. Study II.....	41
5.3. Study III	43

5.4. Study IV.....	46
6. DISCUSSION	47
6.1. Summarizing selected results.....	47
6.2. Challenges for line managers.....	48
6.3. Physical diseases handled better than WRMD	49
6.4. Stakeholder involvement—Health and Safety—and Union Representatives.....	50
6.5. The type of WRMD matters.....	51
6.6. Interaction between the WCS and Workplace	52
6.7. Does the WCS harm employees?—contradicting findings.....	55
6.8. Strengths and limitations.....	58
7. CONCLUSIONS.....	62
8. IMPLICATIONS OF THE THESIS	64
8.1. Practical implications.....	64
8.2. Implications for future research	66
REFERENCES.....	68
APPENDIX 1. PAPER I.....	78
APPENDIX 2. PAPER II.....	89
APPENDIX 3. PAPER III	105
APPENDIX 4. PAPER IV	128
APPENDIX 5. QUESTIONNAIRE.....	147
APPENDIX 6. ADDITIONAL ANALYSIS	163

LIST OF ORIGINAL PAPERS

This thesis is based on the following original papers:

Paper I

How do line managers experience and handle the return to work of employees on sick leave due to work-related stress? A one-year follow-up study

Ladegaard Yun, Skakon Janne, Elrond Andreas Friis, Netterstrøm Bo

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Paper II

How do Danish workplaces handle work-related diseases?—Experiences of employees with notified occupational diseases in the Workers' Compensation System

Ladegaard Yun, Thisted Cecilie, Gensby Ulrik, Skakon Janne, Netterstrøm Bo

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Paper III

Employees with notified work-related mental disorders - experiences in the workplace and in the workers' compensation system

Ladegaard Yun, Skakon Janne, Ståhl Christian, Netterstrøm Bo

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Paper IV

Is the notification of an occupational mental disorder associated with changes in health, income and long-term sickness absence?

Ladegaard Yun, Conway Paul Maurice, Eller Nanna Hurwich, Skakon Janne, Maltesen Thomas, Scheike Thomas and Netterstrøm Bo

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It is my hope that this research will contribute to the politics and practice affecting work-related mental disorders and the continuous work to ensure safe and healthy working conditions as well as qualified and dignified treatment and rehabilitation of sick employees.

Yun Ladegaard

Copenhagen Marts 2018

DANSK RESUMÉ

FORMÅL: Hvad sker der, når medarbejdere bliver syge med en arbejdsrelateret psykisk lidelse? Afhandlingen er fokuseret på arbejdspladsen, arbejdsskadesystemet og samspillet mellem de to, set fra medarbejdere og mellemlæderes perspektiv.

Studie I: Hvordan oplever og håndterer mellemlædere situationen, hvor en medarbejder er blevet sygemeldt med en arbejdsrelateret psykisk lidelse? Studie II: Hvad sker der på arbejdspladsen, når en medarbejder bliver syg på grund af en arbejdsrelateret sygdom? - Hvem er involveret, og bliver medarbejdere med arbejdsrelaterede psykiske lidelser behandlet anderledes end medarbejdere med ryg eller hudsygdomme? Studie III: Hvordan oplever medarbejdere med en anmeldt arbejdsrelateret psykisk sygdom arbejdspladsen og det danske arbejdsskadesystem? Studie IV: Er en arbejdsskadeanmeldelse af en psykisk lidelse associeret med ændringer i helbred, indkomst eller langvarigt sygefravær?

METODER: Forskellige metodiske tilgange blev brugt i studierne, på grund af de forskellige aspekter, der ønskes udforsket. Studie I: Interviews med mellemlædere (N=15) og opfølgende interviews et år efter (N=8). Principper fra Grounded Theory blev anvendt i dataindsamling og analyser. Studie II: Spørgeskemabesvarelser fra medarbejdere med anmeldt arbejdsrelateret psykisk lidelse (N=436), arbejdsrelateret rygsygdom (N=202) eller arbejdsrelateret hudsygdom (N=132), blev sammenlignet via Chi-Square tests, og spørgeskemaernes åbne svarkategorier blev analyseret gennem selektiv kodning. Studie III: Interviews (N=13) og spørgeskemabesvarelser (N=436) fra medarbejdere med anmeldt arbejdsrelateret psykisk lidelse blev analyseret vha. principperne fra Grounded Theory og Chi-Square tests. Studie IV: Sammenligning af registerdata fra anmeldte (N=699) kontra ikke-anmeldte (N=296) patienter med psykiske lidelser, i ændringer i helbred (antal besøg hos egen læge, udskrevet psykofarmaka), langvarig sygefravær og årlig indkomst. Opfølgningen var året efter udredningen på arbejdsmedicinsk afdeling. Poisson-regression og betinget logistisk regression blev benyttet i analyserne.

RESULTATER: Studie I: Mellemlædere anerkender problemer i arbejdsmiljøet, men kan skifte fokus til medarbejderes personlige problemer, når en medarbejder bliver syg med en arbejdsrelateret psykisk lidelse. Mellemlædere kunne opleve krydspres mellem strategiske/forretningsmæssige målsætninger og de relationelle aspekter, når de skulle hjælpe den sygemeldte tilbage, samt manglende organisatorisk støtte. Organisatorisk støtte såsom retningslinjer

og adgang til professionel hjælp samt oplevet god kommunikation med den sygemeldte var vigtigt. Studie II: Når en medarbejder blev syg af en arbejdsrelateret psykisk lidelse, oplevede flere medarbejdere, sammenlignet med medarbejdere med arbejdsrelaterede ryg sygdom eller hudsygdom at: Arbejdspladsen håndterede forløbet omkring deres sygdom dårligt, manglende forebyggelse i arbejdsmiljøet, flere havde dårlige oplevelser med centrale aktører på arbejdspladsen. Mange genoptog arbejdet for tidligt og mange var arbejdsløse 2-4 år efter arbejdsskadeanmeldelsen. Studie III: Forebyggelse i arbejdsmiljøet var et af formålene bag arbejdsskadeanmeldelser af psykiske lidelser, men medarbejderne oplevede et individuelt fokus på arbejdspladsen og i arbejdsskadesystemet. Ledelsen blev ofte oplevet negativt, og arbejdsmiljørepræsentanten og tillidsrepræsentanten var ofte ikke involveret. Ændringer i arbejdsmiljøet og inspektion fra Arbejdstilsynet var sjældne, og mange medarbejdere oplevede utilstrækkelig information i arbejdsskadesystemet, samt fandt spørgeskemaerne svære at udfylde. Medarbejdere med anerkendte (kontra afviste) arbejdsskadesager eller PTSD (kontra depression eller stress) havde oftere positive oplevelser. Arbejdsskadeanmeldelser kunne være en hindring for tilbagevenden til arbejdet, især for medarbejdere med anerkendte anmeldelser. Studie IV: Der blev ikke fundet nogen sammenhæng mellem arbejdsskadeanmeldelser af psykiske lidelser og ændringer i helbred, indkomst eller langvarig sygefravær ved den etårige opfølgning. Et signifikant fald i indkomst blev observeret for både anmeldte og ikke-anmeldte medarbejdere med psykiske lidelser.

KONKLUSIONER: Arbejdspladser bør støtte mellemledere og sikre inddragelse af relevante aktører og et højt kompetenceniveau hos de involverede. Derudover er én koordineret, systematisk tilgang til kortlægning og interventioner mod psykosociale risikofaktorer i arbejdet nødvendig. Medarbejdere med arbejdsrelaterede psykiske lidelser bør ikke rådgives mod at få lavet en arbejdsskadeanmeldelse alene af hensyn til deres helbred. Der er dog plads til forbedringer af arbejdsskadesystemet både i forhold til klar kommunikation, udformningen af spørgeskemaer, arbejdsgiverhøring mv. ift. anmeldelser af arbejdsrelateret psykisk sygdom. Derudover er der behov for et stærkere samspil mellem lovgivnings- og forsikringssystemet og arbejdspladsen for at kunne anvende information om psykosociale belastninger, som kan risikere at føre til arbejdsrelaterede psykiske lidelser, systematisk i forhold til forebyggelse. Arbejdsskadeanmeldelser kan være en værdifuld kilde her.

ENGLISH SUMMARY

AIM: To explore what happens when employees become ill with a work-related mental disorder. This thesis focuses on the Workplace System, the Workers' Compensation System, and the interaction between the two systems, applying the perspectives of employees and line managers.

KEY QUESTIONS: *Study I* explores how line managers experience and handle situations in which employees are sick-listed for a work-related mental disorder. *Study II* analyses what happens in the workplace when an employee develops a work-related disease: who is involved? Is work-related mental disorders handled differently from other types of work-related conditions? *Study III* explores the experiences of employees with notified work-related mental disorder in the workplace and Workers' Compensation System. It compares the responses of employees with rejected and recognised claims and those of employees with different diagnoses, such as PTSD, depression, or stress related illness. *Study IV* examined if workers compensation claims of mental disorders are associated with changes in health, income, or long-term sickness absence.

METHODS: Various methodological approaches were used in these studies, because of the diverse range of aspects studied. *Study I:* Interviews with line managers (N=15) and one-year follow-up interviews (N=8) were carried out and analysed using a grounded theory approach. *Study II:* Questionnaire responses from employees with notified cases of work-related mental disorders (N=436), work-related low back pain (N=202) or work-related skin diseases (N=132) were compared using Chi-squared tests; open-response questionnaire categories were analysed using selective coding. *Study III:* The interviews (N=13) and questionnaire responses (N=436) of employees with notified cases of work-related mental disorders were analysed using a grounded theory approach (for the interviews) and Chi-Square tests (for the questionnaire responses). *Study IV:* Register data of patients with notified (N=699) and non-notified (N=296) mental disorders were compared to identify changes in health—measured through GP visits, prescriptions of psychotropic drugs, long-term sickness absence and annual income. Follow-up were carried out one year after the initial examination. The prospective association between notification status and the four possible outcomes was examined by means of Poisson regression and conditional logistic regression.

RESULTS: *Study I:* Line managers acknowledge problems in the work environment but may also

focus on personal circumstances when an employee develops a work-related mental disorder. The lack of a common understanding of stress creates room for this shift in focus. Line managers experience cross-pressure, discrepancies between strategic and relational considerations, and a lack of organisational support in the return-to-work process. Organisational support, guidelines, knowledge, and good communication were found to be essential for the return to work. *Study II:* In comparison to employees with work-related low back pain or skin diseases, employees who develop a work-related mental disorder are more likely to have a negative experience of workplace management, encounter a lack of prevention in the work environment, had negative experiences with workplace stakeholders (managers and health-and-safety representatives), and resume work too early. Many employees are unemployed 2–4 years after notification. *Study III:* Prevention in the work environment was an aim behind workers compensation claims of a mental disorder, but employees often experienced an individual focus in the workplace and Workers' Compensation System. Managers were frequently experienced negatively, while health-and-safety or union representatives were often uninvolved. Changes in the work environment and workplace inspections were rare; many employees received inadequate information from the Workers' Compensation System and found compensation schemes difficult to fill out. More employees with recognised claims or PTSD had positive experiences in the workplace than employees with depression or stress-related disorders. Workers' compensation claims could be an obstacle for RTW, especially for employees with recognised claims. *Study IV:* The study findings showed that there was no association between notifications of an occupational mental disorder and changes in health, income, or long-term sickness absence one year after the initial medical examination. A significant decrease in income was observed among both notified and non-notified employees with a mental disorder.

CONCLUSIONS: Organisations should provide support for line managers and ensure the involvement of relevant stakeholders with high-level competences. There is a need to coordinate information and to assess systematically the psychosocial hazards that can lead to work-related mental disorders. Employees with mental disorders should not be advised against filing compensation claims in concern for their health, still there is room to improve the Workers' Compensation System. Strengthened interactions between the legislative/insurance and workplace systems are needed to enable information about psychosocial hazards to be used systematically to prevent work-related mental disorders. Workers' compensation claims are a very valuable source in this matter.

Work-related mental disorders

A quantitative and qualitative investigation of employees and managers experiences at the workplace and in the Workers Compensation System

COPEWORK STUDY	Project Workers' Compensation System		
<p>Study I How do line managers experience and handle the return to work of employees on sick leave due to work-related stress? A one-year follow-up study</p>	<p>Study II How do Danish workplaces handle work-related diseases?—The experiences of employees with notified occupational diseases in the Workers' Compensation System</p>	<p>Study III Employees with notified work-related mental disorders - their experiences in the workplace and Workers' Compensation System</p>	<p>Study IV Is the notification of an occupational mental disorder associated with changes in health, income and long-term sickness absence?</p>
<p>Qualitative data Interviews with line managers (N=15) One-year follow-up interviews (N=8)</p>	<p>Quantitative data Questionnaire responses from employees with notified: Mental disorders (N=436) Low back pain (N=202) Skin disease (N=132)</p>	<p>Qualitative and Quantitative data Interviews (N=13) and questionnaire responses (N=436) from employees with notified mental disorders</p>	<p>Quantitative data Register-based study of patients with notified (N=699) vs. non-notified (N=296) mental disorders</p>
<p>Main findings</p> <ul style="list-style-type: none"> • Lack of a common understanding of stress; • LMs acknowledge problems in work environment but turn focus to personal circumstances in relation to WRMD. • LMs experienced cross-pressure, discrepancies between strategic and relational considerations, and lack of organisational support in the RTW process. • Organisational support, guidelines, knowledge, and good communication were essential for RTW. 	<p>Main findings</p> <p>More employees with WRMD compared to low back pain or skin diseases reported:</p> <ul style="list-style-type: none"> • Negative experiences at the workplace in relation to their disorders; • Lack of prevention in the work environment; • Negative experiences with workplace stakeholders (managers and health-and-safety representatives); • Resuming work too early. <p>Many were unemployed 2–4 years after notification</p>	<p>Main findings</p> <ul style="list-style-type: none"> • Prevention in the work environment was a goal; • Individual focus in the workplace and WCS; • Encounters with managers were often experienced negatively • Health-and-safety and union representatives were often not involved • Changes in the work environment and workplace inspections were rare • Inadequate information from WCS, compensation schemes were hard to fill out • WCC could be an obstacle for RTW • More employees with recognised claims or PTSD had positive experiences 	<p>Main findings</p> <ul style="list-style-type: none"> • No association between notifications of an occupational mental disorder and changes in health, income, or long-term sickness absence were found one year after the initial medical examination. • A significant decrease in income was observed for employees with both notified and non-notified mental disorders
<p>Conclusions</p> <p>Organisations should provide support for line managers and ensure the involvement of relevant stakeholders with high-level competences. There is a need to coordinate information and to systematically assess information about psychosocial hazards that can lead to work-related mental disorders. Employees with mental disorders should not be advised against filing compensation claims; but there is room for improvement in the Workers' Compensation System. Interactions between the legislative/insurance and workplace systems must be strengthened so information about psychosocial hazards can be used to systematically prevent work-related mental disorders. Workers' compensation claims are a very valuable source in this matter.</p>			

LM—Line managers, WRMD – Work-related mental disorders, RTW- return to work, WCS – Workers' Compensation System WCC- workers' compensation claim.

INTRODUCTION

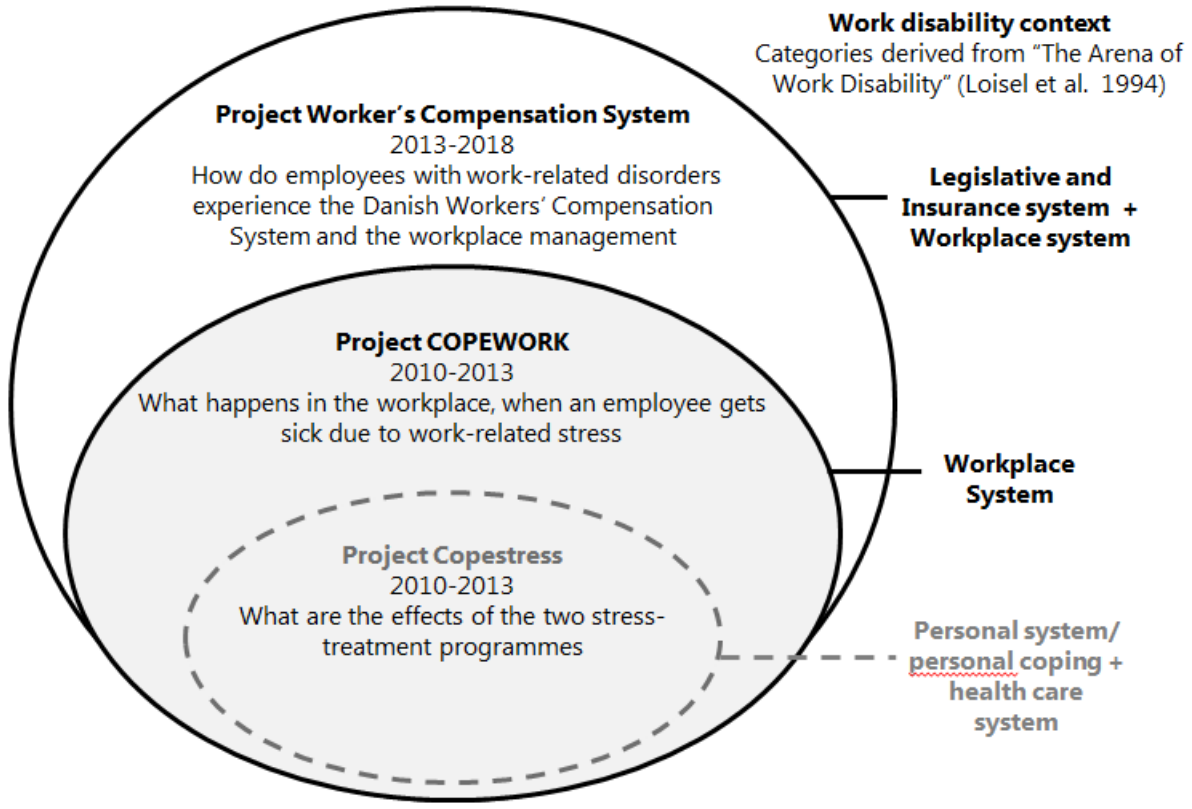
ONE PHD THESIS – DATA FROM TWO PROJECTS

From 2010 to 2013, I was employed at the Department of Occupational and Environmental Medicine at Bispebjerg University Hospital, Denmark, engaged in the Copestress Project, a randomised controlled trial that tested different types of treatment programmes for employees sick-listed due to stress [1,2]. One part of this project involved exploring what had happened at the workplaces of the sick employees; this exploration was called the COPEWORK study. The sick employees were asked if we could contact their line managers and health-and-safety representatives for interviews on this topic. During the interviews, it became apparent that, although the employees' illnesses had been caused solely or partly by the working conditions and both managers and health-and-safety representatives confirmed that there were severe problems in the work environment, often no preventive initiatives were implemented in the workplace [3]. The sick listings were perceived as a private matter and health-and-safety representatives were seldom involved [3].

Physicians in Denmark are obliged to file a worker's compensation claim, if they suspect that an employee is ill due to the working conditions. During the project, physicians discussed whether or not it was useful to file workers' compensation claims [4]. There was an assumption that these claims were a waste of time and energy for sick employees (in 2010, only 4.9% of notified cases of occupational mental disorders were recognised [5]; even fewer were awarded compensation). In line with this a newly published Danish scientific article had suggested that notification of an occupational disease in Denmark could increase the risk of work disability; for this reason, the Danish Workers' Compensation System should ensure that only workers with a high chance of receiving compensation were notified [6]. By contrast, a Danish expert rapport was published suggesting that the legal obligation to notify should be extended to include psychologists, in order to prevent the under-reporting of mental disorders [7]. It was puzzling to find that the experts in this field disagreed on how best to handle claims. If there were problems managing work-related mental disorders in the workplace, workers' compensation claims could be part of the solution; however, they could also contribute to the problem by putting an extra burden on sick employees. This area had never been fully explored in a Danish context. In 2013, Project Workers' Compensation System received funding from the Danish Working Environment Research Fund to investigate the question of whether (and why) workers' compensation claims were harming employees' health. The project used various research methods to explore the subject from different angles.

This thesis is based on data derived from two research projects: the 2010–2013 COPEWORK study and the 2013–2018 Project Workers’ Compensation System (illustrated in Figure 1). The thesis focuses on ‘what happens when employees develop a work-related mental disorder from the perspectives of both employees and managers.

Figure 1. Project/thesis overview. The aims, positions, and relationship of the two studies, as related to the systems in the ‘Arena of Work Disability’.



1. BACKGROUND - WORK-RELATED MENTAL DISORDERS

Challenges in the psychosocial work environment are key issues in the current labour market [8,9]. Psychosocial risks, such as work-related stress and workplace violence, are widely recognised as major challenges to occupational health and safety; there is comprehensive evidence of the impact of psychosocial hazards on a number of mental health outcomes [10]. E.g. there is robust evidence that high psychological demands, low decision latitude (job strain), [11,12] and bullying [11,13] have a significant impact on mental health and the development of mental disorders. In addition, an increased risk of depressive disorders has been found among employees exposed to an effort-reward imbalance [14]. Employees exposed to work-related violence have an increased risk of developing mental disorders [15,16]. There is also a link between the psychological demands of a job and the likelihood that the job holder will develop depression [17]. The International Labour Organisation has acknowledged that psychosocial hazards can cause occupational disease [18]. However, mental disorders like depression are rarely acknowledged to be occupational diseases covered by the Workers' Compensation Systems in most countries [19]. For this reason, employees who develop work-related mental disorders are often worse off than employees with work-related physical diseases when it comes to financial compensation and access to treatment [20]. Mental disorders are related to functional disability in all domains of functioning [21]; they are a common cause of work disability [20], unemployment [22], and lower income [23]. They also represent a major risk factor for early withdrawal from the labour market [24]. The consequences for sick employees are therefore extensive.

1.1. Definition of work-related mental disorders

In this thesis, the term *work-related mental disorders* (WRMD) refers to a mental disorders defined by the ICD 10- classifications: post-traumatic stress disorder (PTSD) (F.43.1), acute stress reaction (43.0), adjustment disorders (F43.2), depression (F32 and F33), disorders of personality and behaviour (F62) [25]. In addition, (stress) symptoms registered by the Occupational Medicine Department or the Labour Market Insurance are also included within this term. WRMD is defined as mental disorders that can be attributed at least partly to adverse working conditions. However, the multifactorial nature of such disorders [26–28] can make it difficult to document a causal relationship between work place exposures and the disorder. Thus, WRMD is *not* equal to an occupational mental disorder recognised in the Workers' Compensation System (WCS).

1.2. Extent and Costs

Today, no surveillance system exists to adequately capture the extent of WRMD on a national or international level [10]. Current estimates rely primarily on self-reported surveys, which do indicate widespread and extensive problems. Twenty-five percent of employees in Europe state that they experience work-related stress during most or all of their working hours and that their work has an adverse effect on their health [8]. Psychosocial hazards and their associated effects on health impose a significant financial burden on individuals, organisations, and societies [29]. Estimates from the United Kingdom show that 526000 employees experienced work-related stress, depression, or anxiety in 2016/2017, resulting in 12.5 million lost working days. Work-related stress, depression, or anxiety accounted for 40% of work-related illness and 49% of all working days lost in 2016/17 [30]. The cost in Europe of work-related depression has been estimated at nearly €617 billion per year, covering absenteeism, presenteeism, loss of productivity, health-care costs, and social welfare costs [31]. A literature review of the cost of WRMD in different European countries has concluded that there could be major economic gains at the societal level if psychosocial hazards in the workplace could be prevented [29].

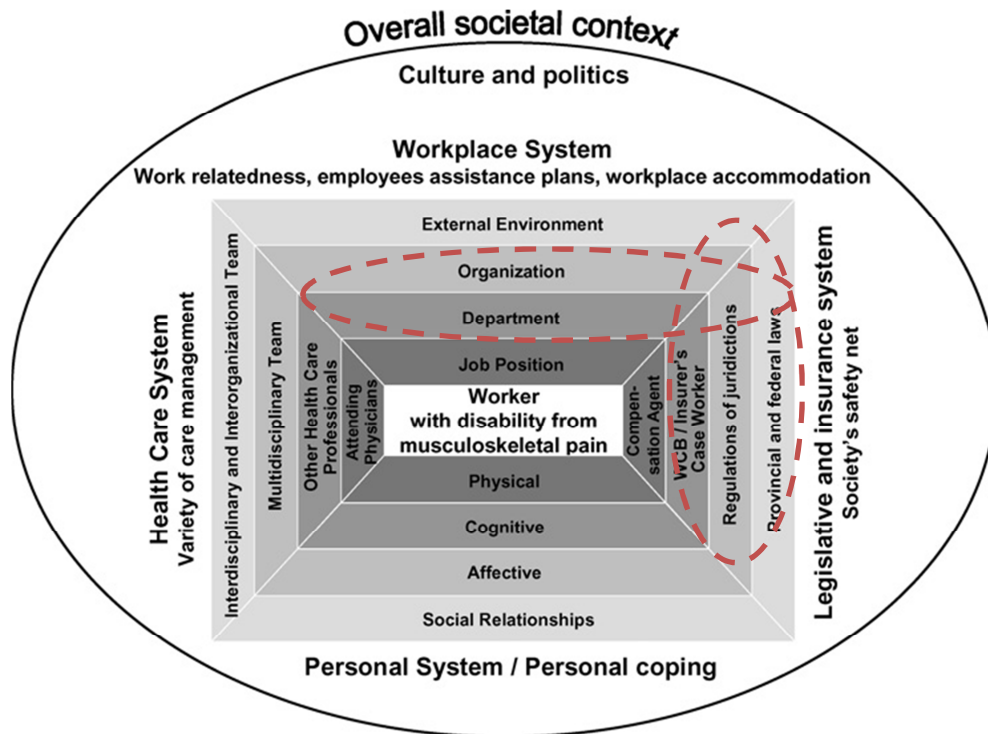
In Denmark, 16.9% (in 2016) of employees report being exposed to negative psychosocial factors, while, at the same time, having symptoms of stress or depression [32]. Job strain has been estimated to result in one million days of sick leave and early retirement for 2500–3000 employees; approximately 1400 Danish employees die every year due to job strain. It has been estimated that these factors cost the health care system DKK 686 million annually; the costs of lost production are estimated at DKK 11.969 million annually [33], and in 2015, workers' compensation for recognised claims of mental disorders cost 622 million Dkr. (83.5 million Euros) [34].

2.3. WRMD in the Workplace and WCS

When an employee develops a work-related disorder, various systems affect that employee's recovery and options for returning to work (RTW) [35,36]. The Sherbrook Model is an evidence-based work disability management model originally developed for employees with musculoskeletal pain. The model illustrates the arena of work disability (Figure 2), incorporating various systems

and levels within the systems, which have been shown to affect the RTW process of sick employees [36].

Figure 2. Arena of Work Disability



The Arena of Work Disability. Adapted from Loisel et al. 1994 [36]

Each system includes various stakeholders, who can interact (e.g. the employee, his or her family, union representative, employer, healthcare provider, insurer, and others). They may have different positions and assumptions that can result in different interpretations and actions in response to the RTW process [37]. The different systems in the Sherbrook Model interact; [38] for example, the Legislative and Insurance System may influence the employee (Personal System); access to health care (Health Care System) or the cost to the employer of sick-listed employees can influence the employer's willingness to accommodate the employee's RTW (Workplace System).

The objectives of this thesis are to study two systems in the model, illustrated by the dotted lines in Figure 2, *The Workplace System* and the *Legislative and Insurance System* (in this case limited to WCS), in relation to employees suffering from WRMD. The following section will focus on WRMD in: A) the Workplace System, studied from the perspectives of both employees and managers; B) the WCS; and C) The potential interaction between the workplace and the WCS,

when a worker's compensation claim of an occupational mental disorder has been filed. The later will be analysed from the perspective of employees as well as by analysing register-data and discussions of selected factors in the workers' compensation process such as employer hearings, economical incitements and workplace inspection procedures.

2.4. A. WRMD in the Workplace

Psychosocial hazards are acknowledged by companies as an area of concern [18]. Nearly 80% of managers in a European survey have expressed concern about work-related stress, while nearly 20% consider violence and harassment to be a major concern [8]. However, fewer than 30% of European workplaces have procedures to deal with psychosocial hazards [8]; more than 40% of European managers consider psychosocial hazards to be more difficult to manage than hazards in the physical work-environment [8]. Finally, the Second European Survey of Enterprises on New and Emerging Risks (ESENER II) has concluded that managing WRMD and psychosocial risks remains one of the most challenging issues in occupational health and safety. This survey has identified problems with difficult patients, customers, and pupils, time pressures, a reluctance to talk openly about issues and psychosocial risks, in risk assessments as barriers for addressing psychosocial risks [39].

2.4.1. RTW for employees with WRMD

Much of the variability on whether or not employees succeeds in RTW depends on what happens in the workplace [40]. Studies have found that work-related disorders can be handled very differently in different workplaces and a range of workplace stakeholders can be involved in the RTW process [41,42]. Workplaces tend to focus on the early phases of RTW, while preventive interventions that relate to the general work environment seem less formalised [41,43]. Studies have found that support and interventions may appear to a larger extent for employees with physical conditions than on employees with mental disorders [44]. This may indicate that employers consider it more difficult to modify work environments to accommodate employees with mental disorders. A meta-review has suggested that the past experiences and expectations of the future for employees with common mental-health disorders are likely to affect the RTW process. Employees suffering from WRMD may be reluctant to return to the workplace if they don't believe that the working conditions that caused the disorder have been changed [45]. An employee often struggles to maintain his or her self-image as a competent employee and therefore rush the RTW or resuming his or her tasks too quickly [45]. Employers have also been shown to be critical of employees with

mental disorders and their workability [46,47]. In addition, employers are sometimes reluctant to approach psychosocial risks because they lack either resources, such as time, employees, or money, or awareness, training, technical support, or organisational guidance and sensitivity towards psychosocial risks [8]. Mental disorders caused by working conditions are often perceived as less legitimate than e.g. the sudden death or illness of a spouse; this attitude can affect the social support that employees receive [48]. A lack of social support may decrease an employee's chances of making a successful RTW, since social support is crucial to the RTW process [49].

2.4.2. Line managers and WRMD

Line managers are the most important stakeholders in facilitating the RTW process [49–52]. Flach et al. have found that a lack of support from supervisors is associated with job loss during sick leave [53]. Line managers are in a position to support workers who are absent due to mental disorders through a combination of support, guidance, and permanent or temporary changes in work tasks [51]. However, studies have suggested that managers may lack the necessary knowledge and room for action to achieve a successful RTW for long-term sick-listed employees [51,54,55]. A gap has been identified between companies' intentions and actual behaviour when implementing initiatives to secure a successful RTW [8,56]. However little is known about the experiences of line managers with employees on sick leave due to a work-related mental disorder. More research is needed in this field [51,54,55].

2.5. B. WRMD in the WCS

Most Western countries have insurance systems that compensate employees for disability, wage loss, and medical expenses [57]. Europe has seen a high increase in workers' compensation claims due to WRMD [19]. In Denmark, there has been a 50.5% increase in workers' compensation claims for occupational mental disorders from 3.107 claims in 2010 to 4.676 claims in 2016 [5]. This increase may represent a dilemma since the literature also indicates that workers' compensation claims may harm sick employees.

2.5.1. The Danish WCS

The Danish legislation requires physicians to notify all physical and mental diseases suspected of being caused by working conditions [4]. Denmark is one of the only European countries to include mental disorders on its List of Occupational Diseases [19]. Other mental disorders are recognised

under a complementary system. Currently, post-traumatic stress disorders (PTSD) and depression are the two most commonly recognised disorders [58]. However, only few claims of occupational mental disorders gets recognized e.g. in 2016, 4.1% of notified occupational mental disorders were recognized [5]. This low number is a result of the medical research that underpins Danish Labour Market Insurance decisions, which has so far demonstrated only a limited correlation between workplace conditions and mental disorders [58]. In addition, the multifactorial nature of mental disorders [26–28] can make it difficult to document a causal relationship between workplace exposures and a diagnosed disorder.

2.5.2. WCS may harm employees' health and labour market attachment

Studies have shown that the workers compensation claims of an occupational disease may have the unintended side effect of increasing the risk of work disability [6]; workers' compensation claims have been linked to a worse prognosis [59–61], a worse recovery, [62] and health-related job losses [63]. A meta-analysis of accidents has found that the mental health of people involved in compensation claims is less likely to improve than that of people not involved in compensation claim processes. No studies have shown any association between compensation claims and positive health outcomes [64]. However, the epidemiological research in this field has been criticised for methodological weaknesses that raise questions about the studies' conclusions [65–67]. Researchers continue to call for further research, pointing out plausible explanations for the association between compensation-related factors and poorer health outcomes [64].

Recently, meta-syntheses and meta-analyses have been conducted to explore workers' compensation processes. Employees perceive the claim process to be stressful, [65] while interacting with key actors in the compensation system, such as insurers [68] and health-care providers, [69] can negatively affect the recovery of claimants. Further administrative hurdles that impede workers' compensation claims have been associated with higher mental health complaints [65].

Although studies in this field have investigated a broad range of diseases and injuries, so far, I have only been able to identify one scientific study that has focused exclusively on employees with notified occupational mental disorders. It was based on interviews in an Australian context with four stakeholder groups: employers, general practitioners, sick employees, and compensation agents. The employees' mental health claims were found to be complex to

manage and associated with conflicting medical opinions, stigmatisation, and the risk of developing secondary problems during the recovery process [70].

Most studies of the effects of claims processes have been carried out in North America or Australia. The noted effects on health and labour market attachment may be less prevalent in a European context, where a different insurance system provides income replacement, health care, and support for the RTW process. An employee's income and access to health care is not completely dependent on the outcome of his or her compensation claim. There is consequently very limited understanding of the experiences of employees with WRMD in WCS and of WCS's effect on notified employees in a European/Scandinavian context.

2.6. C. Interaction between the Workplace and WCS

International research suggests that the workplace and insurance/legal systems do interact in relation to sick employees, [71] and this may have both health inhibiting and health promoting elements [72]. However, the interactions between the workplace and legislative and insurance systems have not been much explored in relation to employees with WRMD; these interactions are also highly dependent on specific jurisdictions. The following section describes three possible ways for worker compensation claims to directly impact workplaces: 1) by eliciting a workplace inspection from the Working Environmental Authority [73]; by eliciting an employer hearing [74]; and 3) by providing financial incentives in relation to claims [34].

2.6.1. Inspection by the Working Environmental Authority

In Denmark, workers' compensation claims are submitted to both the Danish Working Environment Authority and the Labour Market Insurance, which serve two functions. First, the Danish Working Environment Authority receives information about the working environment that is believed to have caused the disease; this information can be used to prevent further cases in the worksite or industry. Second, the Labour Market Insurance assesses whether the disease can be recognised and compensation awarded [73]. Thus, workers' compensation claims may make an important contribution to prevention.

Serious limitations have been identified in relation to the Danish Working Environmental Authority's use of workers' compensation claims of occupational diseases, and the extent to which inspectors can adequately inspect and make decisions relating to the psychosocial work environment [75].

The limitations of the Danish Working Environment Authority

1. The Authority has a very limited use of the workers' compensation claims in general, as its computer system only select cases for its inspectors to examine, if two or more employees from the same workplace have reported the same occupational disorder in the same half year [76]. Otherwise, the notifications are not examined¹.
2. A worker's compensation claim cannot provide the basis for a decision by the Authority on the psychosocial work environment. Most decisions concerning the psychosocial working environment are based on employee statements made during Authority interviews [75]. An inspection can be carried out on the basis of several notifications of occupational mental disorders, but the Authority's decision will depend on whether the employees selected for interviews are willing to make critical statements about their workplace experiences. Studies have shown that employees are unwilling to criticise their employers during inspections, if the employees fear reprisals [77,78].
3. The Danish Working Environment Authority must also ensure that employees remain anonymous. This can result in the Authority opting not to carry out an inspection if they judge that an employee's anonymity cannot be maintained.
4. Around one-fifth of all Danish employees are employed in organisations in which the Authority cannot inspect the psychosocial working environment, due to collective agreements or Occupational Health and Safety Certifications [75]. Although audits can take place, these have been harshly criticised for methodological limitations when used to identify psychosocial risks. The auditors lack necessary competencies and methods of assessing psychosocial risks and psychosocial risk management [79].
5. Finally, the Danish Work Environmental Authority follows the Method Committee's recommendations, which in practice means that the Authority does not deal with cases caused by any of the following factors: A) an overall management decision about the company; B) interactions between management, employees, or their representatives; C) interactions between the employees; or D) conditions external to the company².

¹ A few exceptions exist, e.g. cases of severe chemical exposure, but they are not related to WRMD [76].

² Bullying and sexual harassment are exempt from the Method Committee's recommendations; the Working Environmental Authority can make decisions on these [76].

2.6.2. Employer hearing

In addition to workplace inspections, employers may interact with the WCS during employer hearings. During the compensation process, if the Labour Market Insurance examines the case, the employer may be contacted and asked to confirm/deny/provide a perspective on workplace exposure relating to a claim. This process is not anonymised: the exposure described in the claim is sent to the employer, whose response is communicated directly to the Labour Market Insurance and the sick employee. Employer hearings are perceived as part of the insurance case, but the potentially harmful or preventive aspects of such interactions have not been studied. One potential positive result of a hearing is that an employer becomes aware of psychosocial risks, perhaps initiating preventive initiatives. However, such hearings could also cause adverse effects, since the perception of psychosocial risks is somewhat subjective; the employer's perspective and interests may conflict with those of the sick employee.

2.6.3. Economic incentives in relation to workers' compensation claims

Effect on employers' insurance premiums

The WCS in Denmark is a no-fault system financed by employers [80]. The system exists in parallel to the health-care and social security systems, protecting employers from lawsuits [81]. In Denmark, employers are obliged to provide two types of workers' compensation insurance. Industrial accidents are covered by private insurance companies; in this case, there is a potential experience rating, which means that insurance companies can increase premiums following industrial injuries. Occupational diseases are insured through the Labour Market Insurance, with fixed rates determined by the industry in question. High-risk industries attract higher premiums, but the premiums do not depend on the prevention level provided by the individual employers or compensation claims. According to the *Economics of Tort Law*, [82] this provides only a weak incentive for employers to invest in preventing work-related diseases, as the premium offers no financial rewards for doing so [34].

The extent to which Danish regulations in the field of Workers' Compensation Law, Working Environment Law, and Tort Law incentivise organisations to prevent work-related mental disorders and injuries has been studied in a newly published PhD thesis from the Faculty of Law, University of Copenhagen, Denmark. The researcher concludes that, even though the 2013 Danish Working Environment Act covers both physical and psychosocial work environments, the

employer incentives for preventing work-related mental disorders/injuries are smaller than those for physical diseases and injuries. The probability of fines and sanctions are lower for psychosocial risks and work-related mental disorders; the fines imposed in cases involving psychosocial work environments are smaller than those involving the physical work environment [34]. Thus, the laws do not create sufficient incentives to create effective prevention in the psychosocial work environments.

The interactions between the workplace and the WCS can be summarised as follows. Workers' compensation claims for occupational mental disorders are likely to have a relatively small impact on prevention at the workplace. There is little chance of inspection and the few inspections that do take place rarely result in decisions. Employer hearings may have a positive effect—making employers aware of psychosocial hazards. However, they may equally have a negative effect, damaging the relationship between the employer and sick employee. Finally, employers' insurance premiums are determined by industry and unrelated to the specific employers level of prevention or workers' compensation claims for occupational disorders.

3. AIM OF THIS THESIS

The aim of this thesis was to explore what happens when employees gets sick from a work-related mental disorder.

The thesis focuses on the Workplace System, WCS, and the interaction between the two systems, applying the perspectives of employees and line managers.

The following key questions have been explored:

- Study I Title: ‘How do line managers experience and handle the RTW of employees on sick leave due to work-related stress? A one-year follow-up study’
The specific aim was to explore the ways in which line managers experience and handle situations in which employees are sick-listed due to work-related mental disorders.
- Study II Title: ‘How do Danish workplaces handle work-related diseases?—The experiences of employees with notified occupational diseases in the Workers’ Compensation System’
The specific aim was to study what happens in the workplace when an employee develops a work-related disease—Who is involved? Are work-related mental disorders handled differently from other types of work-related diseases?
- Study III Title: ‘Employees with notified work-related mental disorders—experiences in the workplace and Workers’ Compensation System’
The specific aim was to explore the experiences of employees with notified work-related mental disorders in the workplaces and WCS, ascertaining the extent to which such experience depended on the claim decision (rejected, recognised) or diagnosis (PTSD, depression, stress-related disorders).
- Study IV Title: ‘Is the notification of an occupational mental disorder associated with changes in health, income, and long-term sickness absence?’

The specific aim was to examine the extent to which workers compensation claims of mental disorders are associated with changes in health, income, or long-term sickness absence.

4. MATERIALS AND METHODS

The articles included in the thesis are based on data drawn from two Danish research projects, the COPEWORK study (data collected in 2011–2012) and the Project Workers' Compensation System (data collected in 2013–2014). The thesis also makes use of 2009–2014 data from national registries. Given the diverse range of aspects studied, the articles use a number of different methodological approaches, including semi-structured interviews, questionnaire surveys, and register-based analyses.

The following section describes the materials and methods used in Studies I, II, III, and IV.

4.1. Study I

The data consist of semi-structured interviews with line managers conducted at two time points with a follow-up of one year. The interviews focused on the line managers' experiences when an employee becomes sick-listed due to work-related stress. All interviews were carried out using a grounded theory approach.

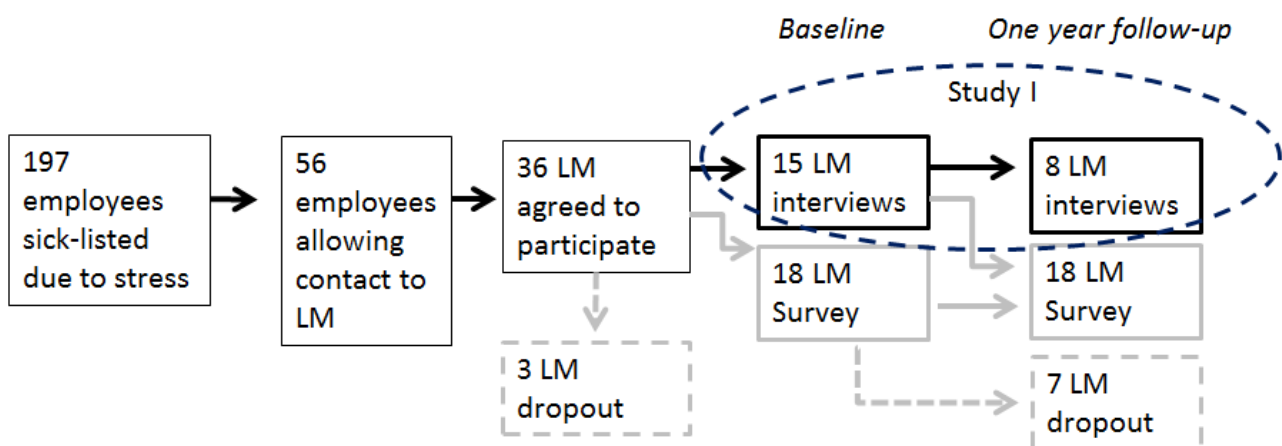
4.1.1. Grounded Theory Approach

Grounded theory is a qualitative methodology developed to understand phenomena about which little is known. [83] For this reason, it is particularly appropriate for exploring the experiences of line managers whose employees have been sick-listed due to work-related stress; limited research has been conducted on this topic and the findings depend on the culture and legislative context. Grounded Theory enables researchers to understand complex social processes; [84] its methods can be used to carry out research in a diverse range of studies, whether or not the aim is theory development [85]. The grounded theory approach consists of systematic but flexible guidelines for collecting and analysing data [85]. A core characteristic of grounded theory research is that data collection and analysis are closely interrelated to engage with the studied phenomenon as deeply as

possible. Analysing the collected data influences the strategy of data collection and vice versa [83] because data collection and analysis happen simultaneously in an iterative process. A detailed description of the data collection method used in Study I is described under 4.1.3. Data collection and analysis – interviews with managers. According to grounded theory, data collection and analysis should continue until no new information is gained, known as the point of *theoretical saturation* [83].

4.1.2. Participants and procedure

Figure 3. The COPEWORK Study, data collection 2011–2012



Line managers (LM)

Managers were recruited through their sick-listed employees, who took part in a randomised controlled trial that tested different types of stress treatment programmes [1,2]. The 197³ employees participating in the trial were asked whether they would allow researchers to contact their managers for an interview. The employees were referred by GPs for stress treatment in project Copestress and they fulfilled the following criteria: (1) on full- or part-time sick leave; (2) employed or self-employed; (3) having had significant symptoms of stress for months, and (4) motivated to participate in a stress treatment project. Participants were excluded if they (1) currently abused alcohol or psychoactive stimulants; (2) were diagnosed with a major psychiatric disorder, or (3) had a significant somatic disorder assumed to be the primary cause of their stress condition.

Of this group, 56 employees allowed us to contact their managers. All 56 employees had experienced at least one major work-related factor, such as high work pressure, poor management,

³ Study I [86] mistakenly cited 210 employees instead of the correct number of 197 employees in the published article. However this error has not affected the study findings.

or a generally poor psychosocial working environment leading to sick listing (assessed by a psychologist or occupational physician during the treatment). Eighty-eight percent of the employees had experienced three or four work-related stress factors that led to sick-leave (for additional details, see [3]). Of the 56 managers contacted, 36 agreed to participate and 3 ultimately dropped out. Figure 3. illustrates the process of data collection.

The saturation point was reached after 15 interviews in the first interview round and 8 interview in the follow-up round; these interviews formed the empirical basis of Study I. The rest of the managers who agreed to participate filled out an online questionnaire developed using the interview guide. In addition, 26 health-and-safety representatives from the various workplaces agreed to participate and were either interviewed or given a questionnaire to complete. The questionnaire data from the managers and health-and-safety representatives, as well as the interview data from the health-and-safety representatives, has been presented in a Danish report: ‘COPEWORK—COPESTRESS Workplace Study’ [3].

Comparing participants and non-participants

Data from the sick-listed employees whose workplaces participated in the study was compared with data from other employees in the stress treatment programme who did not agree to participate (refer their manager), using the following parameters: gender, occupation, and employee’s rating of his/her psychosocial work environment, assessed using the ‘The Copenhagen Psychosocial Questionnaire’ (COPSOQ) [87]. The following differences between groups were found: employees whose managers participated in the interviews or survey had more days of sick leave (80.6 days vs. an average of 68.5 days); more were employed in academic positions and more of the employees had returned to work at the end of the treatment. The employees scored their workplaces more favourably in the COPSOQ for ‘vertical trust’ (trust in management). However, the general COPSOQ scores from employees participating in the project (n=197) were significantly below the Danish population average [3]. measured using 3517 Danish employees [88]. Thus, the participating managers were perceived more positively by their employees than non-participating managers.

4.1.3. Data collection and analyses—Interviews with managers

The baseline data collection was conducted in 2011 and consisted of one-hour individual interviews at the manager’s workplace, in the manager’s office, or in a meeting room. A second researcher attended five interviews as an observer, with the interviewee’s permission. This allowed for subsequent internal reflections on the interview form and content [89].

After one year (2012), eight of the managers received follow-up interviews lasting 30–60 min, after which the saturation point was reached. The follow-up interviews were used primarily to further investigate coded themes from the baseline interviews. Some of the preliminary findings were presented by the researcher during the interviews; these findings were conveyed in the form of verbal statements by the interviewers such as, for example, ‘managers tend to focus on their employees’ private circumstances or personalities to explain stress related sick-leave’ or ‘managers experience a lack of organisational support when an employee is sick-listed as a result of stress’. Managers were given the opportunity to reflect on these findings [89]. The follow-up interviews were also used to record whether the employee had returned to the workplace or not, and the managers’ own reflections on the process. For workplaces that did not participate in the follow-up interviews, information on whether employees returned to work was obtained from a randomised controlled trial in which the employees received stress treatment.

The interview guides included factual as well as explorative questions. Table 1 shows the themes in the final version of the interview guides used in baseline and follow-up interviews with managers in the COPEWORK study.

Table 1. Themes in the interview guide for manager interviews

The interview guide for baseline interviews included background information on the managers and the managers’ perspective on the following areas:
Workplace conditions and the causes of employee stress
Reflections on preventing stress in the working environment
Experiences of handling situations in which employees were sick-listed due to stress
Experiences with the RTW process and thoughts and feelings about the process
Reflections on supportive and inhibiting factors in organisations, with respect to facilitating the RTW

process for employees with stress
Reflections on the challenges and dilemmas associated with stress and the RTW process.
The interview guide for the one-year follow-up interviews also included the following topics:
Events and occurrences in the workplace since the last interview
The return-to-work status of the employee
A dialogue about preliminary findings/hypotheses

Interviews were recorded and transcribed verbatim and the transcripts were anonymised. The interview transcripts were analysed using Grounded Theory principles to identify the main themes. An initial open coding, followed by a sequential transcript review, was conducted. Codes that described processes, actions, thoughts, and feelings were generated. The core codes described ways in which managers experienced and handled situations in which employees were sick-listed due to work-related stress. Selective coding identified codes that were frequently mentioned or stood out as being particularly important. The analyses were supported through extensive memo-writing [85]. Following every 2–3 interviews, the data were analysed and emerging themes were used to revise the interview guide. In this way, themes that were found to be central were explored and developed further, while other themes were excluded.

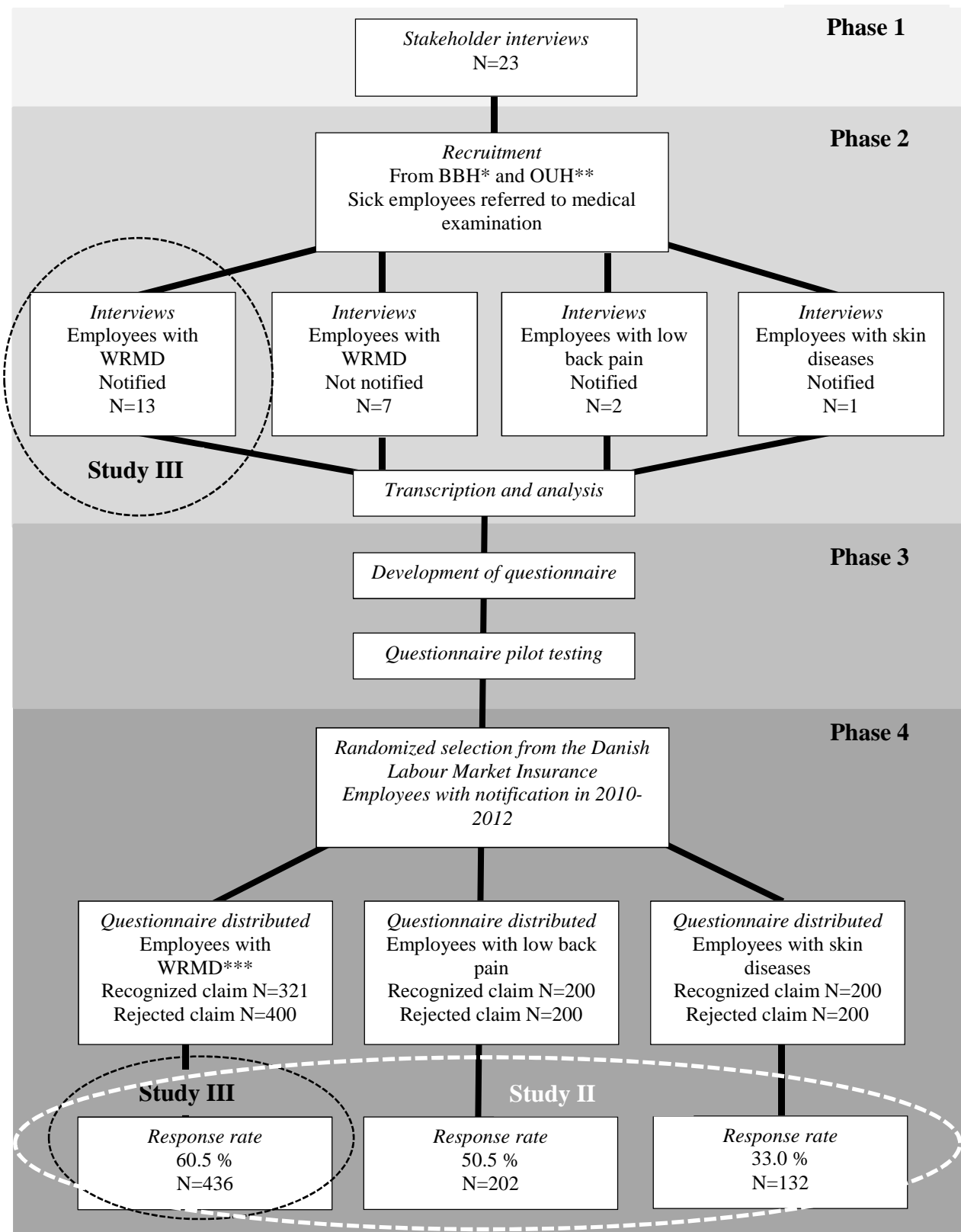
4.2. Data collection for Study II and Study III

Study II and III both analysed data collected within the Project Workers' Compensation System. The data collection procedure used in this project is presented first, followed by the specific procedures and analyses used for Study II and III, which are described separately.

4.2.1. Data collection in Project Workers' Compensation System

Figure 4 illustrates the Project Workers' Compensation Systems' research design, showing the data analysed in Study II and III.

Figure 4. Data collection in 2013–2014 from the Project Workers’ Compensation System
Data analysed in Study II and Study III are illustrated



*BBH—Bispebjerg University Hospital, Department of Occupational and Environmental Medicine

**OUH—Odense University Hospital, Department of Occupational and Environmental Medicine

*** Since post-traumatic stress disorder (PTSD) was the only mental disease on the List of Occupational Diseases (diseases on the list are processed differently from diseases not on the list [19]), the selection of employees with work-related mental disorders was randomised using four subgroups: Recognised claims (recognised claims excluding PTSD (N=121, i.e. all claims that fulfilled inclusion criteria) + recognised claims including PTSD (N=200)). Rejected claims (rejected claims excluding PTSD (N=200) + rejected claims including PTSD (N=200)).

The following section describes the four phases of data collection from the Project Worker's Compensation System.

Phase 1—Stakeholder interviews

Interviews (N=23) were conducted with different stakeholders in the Danish WCS. Strategies for conducting *elite interviews* [90,91] were applied during this phase of data collection, meaning that the interviewer actively engaged in discussions, provided 'facts' and additional or contrasting views during the interviews to challenge the interview and gain a degree of power symmetry in the relationship between interviewer and interviewee [89].

The following stakeholder interviews were carried out: Group or individual interviews with health-care professionals from all occupational medicine departments in Denmark. Interviews with central stakeholders from the Danish Working Environmental Authority, the Danish Labour Market Insurance, the Confederation of Danish Employers (DA), Danish municipalities, unions, an insurance company, a law firm, and a member of the Board of Industrial Injuries. The stakeholder interviews were analysed using the grounded theory approach, with initial coding followed by focused coding and memo writing throughout the whole analytical process [85]. The focus was on factual information as well as descriptions of the different WCS processes and political positions. The stakeholder interviews provided preliminary knowledge, information about different stakeholders in the system, various political views in the WCS, information on the use of notifications in stakeholder organisations, and professional opinions about the potential impact of compensation claims on notified employees. Additional health-care professionals shared their own experiences and practice in relation to compensation claims for work-related mental disorders, as well as their views and interpretations of the legislation in this area. Information gained during the stakeholder interviews informed the development of the interview guide for employees and the development of the questionnaire survey.

Phase 2—Interviews with employees with work-related disorders

Employee interviews were collected during 2014 using the grounded theory approach. Interviews were collected in 2–3 chunks, after which they were analysed. This produced emerging themes and the interview guide was revised. Some themes identified as central were explored and developed further; others were discarded during the data collection and analysis.

Employees were recruited by occupational physicians and psychologists at the Department of Occupational and Environmental Medicine at Bispebjerg University Hospital and Odense University Hospital in Denmark. This led to 13 semi-structured interviews of employees with notified WRMD and 7 interviews of employees with non-notified cases of WRMD. There were also two interviews with employees who had notified low back pain and one with an employee with a notified skin disease. Participants were contacted by phone by the first author; they were asked whether they wanted to be interviewed in their homes, at a nearby place, at the Department of Occupational Medicine, or at the University of Copenhagen. Participants filled out a consent form before the interview and were given the opportunity to withdraw their data at any point. Each interview lasted approximately one hour and focused on the employee's experiences in the workplace before and after being sick-listed. It covered experiences with different stakeholders in the workplace and WCS, the expectations and motivations behind the claim, and the WCS process. Interviews were recorded, transcribed verbatim, and coded in NVivo10 using open and selective coding and memo writing. [85]

Phase 3—Development of the questionnaire survey

Based on preliminary findings from the employee and stakeholder interviews, a questionnaire was developed. It was pilot tested in accordance with the principles established by Boynton [92]. Initially, five employees with notified occupational disorders filled out the questionnaire and were interviewed about each item; this process cast light on the ways in which they interpreted and chose to answer the questions. Based on their feedback, the questionnaire was revised. Next, 13 employees tested an online version of the questionnaire using the software programme SurveyXact and provided feedback, after which the final version was developed.

The final questionnaire consisted of 40 questions and a number of sub-questions; both scales and open-response categories were used. Table 2 shows selected items from the questionnaire, which is relevant for the studies in this thesis. The full questionnaire is shown in Appendix 5.

Table 2. Selected items from the questionnaire used in Project Workers' Compensation System

Background information	Gender, age, citizenship, educational level, current occupation
Health	<ul style="list-style-type: none"> - Self-rated health, current - Self-rated health before the notified disorder
Work ability	<ul style="list-style-type: none"> - Self-rated work ability, currently - Self-rated work ability before the notified disorder
Occupation	<ul style="list-style-type: none"> - Current - At the time of the notification
Type of employment	At the time of notification (e.g. time-limited, permanent, hourly wage earner, self-employed)
Return to the same workplace	<p>Currently employed at the same workplace as at the time of notification</p> <ul style="list-style-type: none"> - If not why? (e.g. fired, quit, period of employment ended)
Sick-leave	Sick-leave in relation to the notified disorder (e.g. long term >8 weeks, short term <8 weeks)
Workplace management	How did your workplace handle the process when you became sick? (e.g. well, badly)
Workplace knowledge of the workers' compensation claim	Did the manager at your (former) workplace know that you had a disorder notified to the Danish Labour Market Insurance?
Changes in the work environment	Were any changes made to your working environment as a result of your disorder?
Workplace stakeholders	How significant were the following people at your former workplace during the process of getting sick and having a workers' compensation claim?— top management, line manager, union representative, health-and-safety representative, colleagues (e.g. positive, neutral, negative)
Inspection by the Danish Working Environment Authority	<p>Has the Danish Working Environment Authority carried out an inspection at your workplace as a result of your claim?</p> <ul style="list-style-type: none"> - If yes or partially—how did you experience the inspection?
Motivation behind the workers' compensation claim	What did you primarily hope to gain as a result of your compensation claim? (e.g. compensation, prevention, registration as a precaution)
The compensation process	Did you feel adequately informed about the workers' compensation

	process?
Compensation schemes	What was it like filling out the compensation schemes (e.g. easy, neutral, hard)
Negative effect of the workers' compensation claim	Did the process in relation to the workers compensation claim hinder or delay your return to the labour market?

Phase 4—Distribution and collection of questionnaires

In 2014, employees with a notified occupational mental disorder, notified low back pain or notified skin disease (notified in 2010–2012) were randomly selected from the Danish Labour Market Insurance database. An employee could only be included once; workers with pre-existing claims were excluded. The only accepted WRMD on the 2014 List of Occupational Diseases was PTSD; the processing of PTSD claims was therefore somewhat faster and smoother [19] than the processing of other WRMDs. Selected employees with WRMD were therefore divided into four groups: 1) recognised claims excluding PTSD (N=121); there were only 121 registered claims, after the inclusion criteria; 2) recognised claims including PTSD (N=200); 3) rejected claims excluding PTSD (N=200); rejected claims including PTSD (N=200). Employees with low back pain were divided into two groups—recognised claims (N=200) and rejected claims (N=200); employees with skin diseases were divided into those with recognised claims (N=200), and those with rejected claims (N=200).

In December 2014, the selected employees were contacted by letter and asked if they wanted to participate in the survey. Included in the letter were a description of the study and a personal code for the online questionnaire. After a month, a follow-up letter that included the personal code for the electronic questionnaire, the questionnaire in paper form, and a stamped, addressed return envelope were also mailed.

Out of the 1521 employees selected, 770 completed the questionnaire. The response rate varied between the three types of occupational diseases, with 60.5% of employees with WRMD responding, alongside 50.5% of those with low back pain and 33% of those with skin diseases. Chi² tests were used to test the differences between respondents and non-respondents in a dropout analysis (ref: Study II). Among the responders, significantly more women, people over 55,

education/health-care industry workers, and participants with stress-related mental disorders completed the questionnaire (ref: Study III). The implications of the response rate for the studies findings are discussed in 6.8. Strengths and Limitations.

4.3. Study II

4.3.1. Participants and procedures

The data analysed in Study II consisted of questionnaire responses from employees with WRMD, work-related low back pain or work-related skin diseases, collected within the Project Workers' Compensation System. The study compared the experiences of employees with different work-related diseases and explored whether workplace management and stakeholders' involvement differed in accordance with the type of work-related disease.

4.3.2. Analysis

The questionnaire responses (N=770) were divided into three diagnostic groups: *Mental disorders* made up 56.7% (8.2% post-traumatic stress disorder (PTSD), 12.5% depression, 36% stress etc.—including Stress without specification, adjustment disorders, anxiety, and non-specified psychiatric disease). *Low back pain* made up 26.2%. *Skin diseases* made up 17.1% (11.4% toxic eczema, 3.5% allergic eczema, 2.2% other skin diseases). The diagnoses represented the final diagnostic formulation recorded in the Labour Market Insurance register in relation to first claim decisions. The questionnaire responses given by the participants in the three diagnostic groups were analysed using descriptive statistics and tested via Chi-square tests to identify any significant differences between the groups. Responses to the open-response categories were analysed using selective coding.

As there were significant differences between employee characteristics in the three diagnostic groups, additional chi-squared tests were carried out to test differences in responses by industry (service, education/health, industry/crafts/agriculture, police/defence/jail), self-reported health at the time of response: good health (excellent, very good, good) and bad health (less good, bad), age (<40 years, 40–55 years, > 55 years), compensation claim decision (recognised, rejected) and gender (female, male). The results of these tests are shown in Appendix 6.

Other methods, such as a logistic regression, were considered, but no dichotomisation of the questionnaire response categories was possible, since merging varied response categories (positive, neutral, negative, not relevant, etc.) would result in misleading results.

4.4. Study III

4.4.1. Participants and procedures

Study III combined analyses of interview data from employees with notified WRMDs (N=13) with analyses of the questionnaire data from employees with notified WRMD (N=436). The aim was to explore the experiences of employees with notified WRMD experiences in the workplace and Danish WCS. Since the data collection process has been described in 4.2. Data collection for Study II and Study III, this section only provide additional information.

Interviews

Interview participants (N=13) were recruited by physicians and psychologists at two Danish Occupational Medicine Departments from 2 January 2014 onwards. The inclusion criteria were as follows: significant symptoms as a result of an occupational mental disorder, having notified an WRMD and being employed when the disease started. *Exclusion criteria*: Current abuse of alcohol or psychoactive stimulants, major psychiatric disorder or significant somatic disorder assumed to be the primary cause of the mental disorder or the person being potentially unpredictable or dangerous.

Questionnaire responses

Chi² tests was used to compare participants (N=436) with non-participants (N=285) in a dropout analysis. Significantly more women participated, employees over the age of 40 years, more employees with stress-related disorders and anxiety and less with PTSD. Finally, more participants from Education/health and less from Police/defence/jail. No significant differences were found related to recognised claims or financial compensation.

The sample was analysed comparing three diagnostic groups: *Post-traumatic stress disorder*, F43.1 (N=63). *Depression* F33 and F32 (N=96). *Stress etc.*: Adjustment disorders, F43.2–F43.9 (N=161), Stress without specification, Z (N=96), anxiety, F41 (N=4) and non-specified psychiatric disease (N=16). Diagnosis was the final diagnosis given in the Labour Market Insurance register in relation

to the first decision given on the claim. In addition, responses from employees with recognised claims were compared to responses from employees with rejected claims.

4.4.2. Analysis

The interviews were analysed using a grounded theory approach (described in 4.2. Data collection for Study II and Study III). The data collected through the questionnaire survey were analysed using descriptive statistics, while the differences between the diagnostic groups and recognised/rejected claims were tested using χ^2 tests. The responses to the open-response categories in the questionnaires were analysed through selective coding [85].

4.5 Study IV

4.5.1. Participants and procedures

Study IV consisted of a follow-up study based on a sample of 995 patients examined at the Department of Occupational- and Environmental Medicine of Bispebjerg University Hospital in Copenhagen, Denmark, by physicians from 2010 to 2013. The aim was to examine whether notification of WRMD was associated with changes in health, income, or long-term sickness absence. Of the patients included, 699 had notified an WRMD, while 296 patients had an un-notified mental disorder. To be included in the study, patients had to be 18 or older at baseline, alive at the follow-up, and registered at the Department of Occupational and Environmental Medicine with a mental disorder between 2010 and 2013, with complete data on the requested outcome variables in the registers. All patients were referred following medical examinations by their general practitioners, other medical specialists, union representatives, municipalities or workplaces, because it seemed possible that the mental disorder had been caused by the working conditions.

For GP visits, prescriptions of psychotropic drugs, and long-term sickness absence, the baseline was the calendar year of the occupational department medical examination. Disorders were either notified during the examination or had been notified prior to the examination (normally no more than two months before the examination). Thus the examination year was typically also the year of notification. Follow-up took place the following year. The baseline for income was the calendar year before the medical examination, while follow-up was the year after the medical examination. A different income baseline was used to detect changes in income from before to after the employees became sick.

Data were extracted from four registers by Statistics Denmark, the central authority on Danish statistics. They were analysed on the Statistics Denmark server, in accordance with the United Nations' Fundamental Principles of Official Statistics [93].

<p>GP visits</p> <p>Data on GP visits per year. GP visits were treated as a count variable, ranging from 0 to a maximum of 7 visits per person.</p>	<p><i>Danish Patient Registry</i></p>
<p>Prescriptions of psychotropic drugs</p> <p>Prescriptions data included anxiolytics, sedatives, hypnotics, and antidepressants. This variable was dichotomised into 'no prescriptions' and 'any prescription'.</p>	<p><i>The Drug Registry</i></p>
<p>Yearly income</p> <p>Data on total personal income were dichotomised into $\leq 300,000$ and $>300,000$ Dkr/ year (approximately 45,000 US dollars or 40.290 EUR). Apart from property income, 'income' included social benefits and all types of individual earnings per calendar year.</p> <p>This cut-off point was chosen because the average Danish employee's total personal income in 2009 was 368.922 Dkr/year. The average for employees at the lowest of the four levels of employment was 306.789 Dkr, calculated by Statistics Denmark (20.9.2016).</p>	<p><i>Income Statistics Register</i></p>
<p>Long-term sickness absence</p> <p>Data on long-term sickness absence were dichotomised into ≤ 30 days vs. >30 days.</p> <p>The KMD registry records all sickness benefits in Denmark. An employer is entitled to reimbursement for sickness absence when an employee is on sick leave for more than 30 days. For this reason, sickness absence was dichotomised into over and under 30 days of sick-leave during one calendar year.</p> <p>In the analyses of sickness absence, patients were excluded from the analysis if they had an interruption of the sickness benefits during the calendar year, which was not due to RTW. Examples of interruption included retirement, a change from sickness benefits to unemployment benefits, starting an education, or failing to comply with the rules for obtaining sickness benefits. Of the participants, 327 were excluded at the baseline and 177 at the follow-up.</p>	<p><i>KMD registry</i></p>

Confounders

The selected confounders were known risk factors for mental health, based on previous evidence: *gender* [94–96], *age*, [97–99] *diagnosis* [17] and *occupation* [100,101]. All confounders were registered during medical assessments at the Department of Occupational and Environmental Medicine. As part of the examination, physicians made diagnoses in accordance with the International Classification of Diseases (ICD-10) and noted the patient's current job title. The job

titles were merged into six different occupational groups: 1) health care, hospitals, nursing homes, home care, and social services; 2) children's institutions of all kinds, schools, colleges and universities; 3) Restauration, kitchen, cleaning, trade, transport, and services; 4) administration, communication, libraries, and museums; 5) police, military, prisons, and search-and-rescue work; 6) manufacturing and construction.

4.5.2. Analysis

The distribution of baseline characteristics among notified and non-notified patients was compared using a Chi-squared test. The distribution of outcome variables was calculated among non-notified and notified patients both at the baseline and at the follow-up. The prospective association between notification status and GP visits at the follow-up was examined by Poisson regression models using Generalised Estimation Equations with robust standard errors. The prospective associations between claim status and the three dichotomous outcomes (prescriptions, annual income, and long-term sickness absence, were analysed using a conditional logistics regression. Due to the otherwise small resulting groups, these three outcomes were dichotomised. Changes in outcome between baseline and follow-up were examined in all categories; the association between notification status and outcome was adjusted for time. Finally, the associations between time, gender, age, diagnosis, and occupation were adjusted.

In preliminary analyses, the interactive effect of time, notification status, and the covariates of the four outcomes were tested; none of these interactions were statistically significant. The statistical software R (version 3.2.3) was used for all analyses.

5. RESULTS

This section summarises the results of the four studies that make up this thesis.

5.1. Study I

How do line managers experience and handle the return to work of employees on sick leave due to work-related stress? A one-year follow-up study

The results were divided into four themes:

1. Lack of a common understanding of stress
2. Shift in focus from work environment to the individual
3. Challenges experienced by managers during the RTW process
4. Supportive factors experienced by managers during the RTW process

1. *Lack of a common understanding of stress:* Several managers pointed out that the word ‘stress’ has no exact meaning, as it describes a range of conditions from being somewhat busy to feeling seriously anxious and ill. Some managers found the broad use of this word problematic since it was hard to know when to take action. Discussions of stress varied. In some organisations, stress was not discussed at all; others had a more open dialogue. The majority of managers, either directly or indirectly, described stress as being at least partly associated with personal weakness. The lack of a common understanding of stress, its severity, and possible causes may discourage employees from acknowledging stress-related problems and impede the implementation of preventive stress interventions in organisations.

‘Stress to me is the negative version [of being busy]. The problem nowadays is that people use the word ‘stress’ randomly. Now everything is stressful... I think people forget to distinguish between the negative and the positive. It’s okay to be busy... You don’t become ill by being busy.’ (Line manager, IT company, private sector)

‘No, we talk about being very busy, and about there being a lot of pressure and people being fed up. That’s what we talk about.’ (Line manager, Authority, public sector)

2. *Shift in focus from the work environment to the individual:* Tough and demanding working conditions involving large workloads, time pressure, tight deadlines, restructuring, or downsizing were described by all managers. Several managers expressed frustration with having several employees away from work with long-term stress-related absences. However, when talking about who was responsible for specific employees on stress-related sick leave, there was a sudden shift in focus. From talking about problems in the work environment, the focus changed to emphasising the employees' personal issues, such as family problems or psychological predispositions, such as perfectionism or an inability to adapt to change. This shift occurred in most of the interviews. The managers felt that periods of sick-leave due to WRMD should be handled privately between managers and employees.

'I have an employee who is extremely dedicated to her work, very detail-oriented, an incredibly good performer, the best colleague, always ready to help, always willing to participate in projects. She is the world's best mother. She always picks up her children at 3 pm... When she celebrates birthdays, she will always make homemade buns, homemade jam; they don't have one birthday, they have three. She visits her grandparents at the nursing home at least every Thursday. She gets sick because of stress.' (Line manager, Insurance company, private sector)

'We have a tendency to say it's something private, so we just avoid the responsibility... There's a need to say it's not our responsibility.' (Line manager, Media company, private sector)

3. *Challenges experienced by managers in the RTW process:* More than half of the managers said that they were affected emotionally when employees went on sick leave due to work-related stress. They felt both sorry for the employee and guilty about not having been attentive enough to prevent the situation. At the same time, they expressed frustration that the employee did not ask for help earlier and considered the employee partly responsible for the situation.

The majority of line managers experienced cross-pressure due to opposing demands from employees and top management. Co-workers sometimes feared that they too would become sick due to stress and expected managers to improve their working conditions. Consequently, some managers chose to cite personal reasons for an employee's sick leave without that person's permission, as a way of avoiding blame and further demands from remaining employees. At the same time, top management expected departments to comply with set goals and budgets, despite

having fewer resources, when one or more employees were sick-listed. Several managers were pressured by both top management and co-workers to ensure a quick RTW of a sick employee. Managers stated that it was difficult to take proper care of sick-listed employees, while at the same time taking care of the remaining co-workers, who often had to cover the sick-listed employee's work. There was a discrepancy between the human-relationship perspective (a manager knowing the employee personally, being empathetic, and trying to accommodate RTW) and the strategic responsibility for economy and productivity. Managers had to consider both when deciding whether the employee should be supported to return or be fired. Managers described not having the time, support, or knowledge to implement preventive interventions in the work environment; several managers functioned alone, with no access to organisational support.

'I take most of the responsibility, so I walk around feeling guilty, thinking it's probably me...that I'm not good enough. But the responsibility is, of course, only half mine. It's a shared responsibility so the employee is also responsible.'
(Line manager, Kindergarten, public sector)

'I think it's really, really hard, especially as a line manager... You need to meet the goals that are set for you... and, on the other hand, take care of a group of employees who are sick, have been sick, or are at risk of getting sick.'
(Line manager, Kindergarten, public sector)

'I wish there was a tool, something we could just pull out and say, 'This is what we're going to do now'... There is a stress policy but let me say it loud and clear... it's like we do not want to have employees who are stressed and that's it. That's all I have as a manager to relate to.'
(Line manager, Insurance company, private sector)

4. *Supportive factors experienced by managers in the RTW process:* Knowledge and prior experience were described by several managers as their most valuable tools, preparing them to handle both current and future stress-related problems. Good communication and a relationship with the absent employee were also essential, as well as mutual trust and the ability to speak openly about the causes and consequences of stress. In the vast majority of workplaces where

managers reported good communication and a positive relationship with the absent employee, the employee returned. Managers working in the transportation industry often had clear company guidelines and policies on sick leave and the RTW process, which included access to professional guidance and the option to send employees for free psychological counselling to improve their health; this was perceived as helpful. Differences were noted among some managers with comprehensive experience and a minimum of 12 years of seniority. Such managers were able to influence the decisions of top management regarding budgets and productivity demands. In this way, they felt they could protect their employees from additional work overloads. In workplaces where the managers described poor or no communication between the manager and the absent employee, the situation often resulted in the dismissal of the employee.

5.1.1. Summary: Study I

The line managers struggled with several dilemmas when an employee was sick-listed with a WRMD. Feelings of guilt, discrepancies between strategic and relational considerations, and cross pressure between productivity demands, the needs of colleagues, and the needs of the sick employee's needs were identified. Often the responsibility for supporting the sick employee was left entirely to line managers, who lacked the knowledge, room for action, and organisational support they needed to handle the situation. Despite acknowledging the problematic working conditions, line managers tended to explain the sick leave by shifting the focus to the sick employee's own responsibility and personal circumstances. A lack of a common understanding of stress created room for this shift in focus. In addition, the sick-leave itself was seen as a private matter handled between the manager and employee. These circumstances may inhibit preventive initiatives in the work environment.

5.2. Study II

How do Danish workplaces handle work-related diseases?—Experiences of employees with notified occupational diseases in the Workers' Compensation System

The results are divided into three themes:

1. Process and prevention in the workplace
2. Stakeholder involvement
3. Employment status 2–4 years after notification of the disease

1. *Process and prevention in the workplace:* The results indicated that employers' efforts and preventive actions to accommodate sick employees varied, depending on the disease. Some employers accommodated employees at the individual level but did not change the overall work environment, even though the employee was sick because of the working conditions (54.5% in total reported no changes). The study found that significantly more employees with WRMD (68.8%) than employees with low back pain (46.5%) or skin diseases (16.7%) thought that the workplace handled their illness badly. Employees with skin diseases (23.5%) more frequently experienced preventive initiatives in the work environment than employees with WRMD (12.4%) or low back pain (12.9%). In addition, 6.3% reported that the Work Environmental Authority had inspected their workplaces even though an occupational disease was notified and was registered by the Authority for preventive purposes [4].
2. *Stakeholder involvement:* Employees with WRMD had a much more negative view of top management, line managers, and occupational health-and-safety representatives than employees with low back pain or skin diseases. However, in most cases the occupational health-and-safety representative was not involved in the process, (52.3%) irrespective of the type of disease. The union representative was more often involved when an employee had a WRMD or low back pain; however, this stakeholder was sometimes viewed negatively by employees. The study found that more employees with notified skin diseases had more positive experiences of stakeholders than employees with WRMD or low back pain.
3. *Employment status 2–4 years after notification of the disease:* Many employees felt that they resumed work too early (35.1%). In general, 2–4 years after the notification, 23.2% of the employees with WRMD, 28.7% of those with low back pain and 39.4% of those with skin disease were employed at the same workplace. However, many employees with WRMD (39.2%)

and low back pain (47.5%) were unemployed 2–4 years after the notification; for employees with skin diseases, this figure was even lower (18.2%).

5.2.1. Summary: Study II

Employers' efforts and preventive actions when an employee was sick-listed with a work-related disease varied, depending on the type of disease. More employees with WRMD had negative experiences with workplace managers and stakeholders; they seldom reported preventive initiatives in the work environment, compared to employees with skin diseases or low back pain. Many employees felt that they resumed work too early and were unemployed 2–4 years after the notification. Workplace inspections related to workers' compensation claims were rare, regardless of the type of disease notified.

5.3. Study III

Employees with notified work-related mental disorders—experiences in the workplace and Workers' Compensation System

The results are divided into four themes:

1. Prevention in the work environment was an aim
2. Problems poorly handled in the workplace
3. Challenges related to workplace inspections
4. Experiences in the WCS

1. Prevention in the work environment was an aim:

One of the employees' most important motivations behind the workers compensation claims of mental disorders was the hope that the claim would lead to preventive interventions in the workplace, preventing others from getting sick in future (51.1%). In particular, more employees with depression or stress related sickness were motivated by the possibility of prevention (depression 51.1%, stress 54.9%) than employees with PTSD (34.9%).

2. Problems poorly handled in the workplace:

WRMD rarely led to changes in the work environment, but more employees with

recognised claims reported changes (yes 16.2%, somewhat 19.6%) than employees with rejected claims (yes 9.1%, somewhat 16.4%). The employees experienced an individualised focus in the workplace, focusing on themselves more than the problems in the working environment.

'We were sent to a seminar with a coach ...the manager wanted us to be one big family. Then I said 'it's not just about being a big family, it's also about my daily life, and my private time, but she [the manager] did not see it that way. She simply meant we should be available. We could go 13 days without a day off and when I say 13 days it's twenty-four seven. Try to work 13 days and be available. You may be sitting at home with phones and computers, but you're still on, right? And in a split second, you have to be able to turn around and be in sorrow, not in sorrow, but you must talk to people who are in sorrow.'

(Undertaker, Funeral company, private sector)

Many employees thought that their workplaces had handled the process poorly when they became sick (68.8%). Compared to the other groups, more employees with PTSD and recognised claims thought that their workplaces had handled the process well. Stakeholders such as health-and-safety representatives were often not involved (50.7%); when they were, more employees experienced them negatively (17.4%) than positively (12.4%). Management involvement was also experienced as negative by most employees (52.3%). Colleagues and union representatives were perceived most positively.

3. Challenges related to workplace inspections:

Employees rarely found that their claims resulted in a workplace inspection by the Working Environmental Authority (8.3%), even when this was an important motivation behind the claim. Sick employees sometimes had a negative experience of inspections that did not result in any decisions.

[Reaction to a workplace inspection leading to no decision] 'It was like a slap in the face when, during one of my night shifts, I read the e-mail which had been sent round. It was like being told that because you don't want to be physically assaulted every week by a boy and be spat at and have your hair pulled and be kicked black and blue all over, that it's all just me whining and making up a load of rubbish. And to be told afterwards by the parents that everything you did was wrong. And then you get an email saying that everything was fine [email from the managers describing no decisions after inspection from the Working Environmental Authority] and we should accept that it just goes with the job.' (Nurse, hospital, public sector)

4. Experiences in the WCS:

The claim process was perceived as demanding; 41.1% of employees said they were not sufficiently informed about the process in the WCS and several found the compensation schemes difficult to fill out (45.6%).

Employee: 'I did not realise there were so many things, and so many papers [to fill out]. I simply did not know before it started to flip through the door with papers and papers and papers.'

Interviewer: 'How have you experienced it, getting all these questionnaires?'

Employee: 'Yes, it's been confusing because I do not know what to do, what to write and what not to write. Especially now, when it's coming [questionnaires] again, it's almost the same they ask. So, I do not know why [curse] they want the same information again.'

(Factory employee, Production Company)

Employees experienced an individualised focus in the WCS, where they had to prove that the disorder was caused by the working conditions and not a personal vulnerability.

'I sort of thought, they're [the Workers' Compensation System] spending more time trying to find out if there might be other things causing the problem, than they are actually looking at the problem... Why don't they go out and look in the workplace, why aren't they out looking at how things are going there? If you don't believe me, just drive out and have a look... you spend half a day there and you'll realise what's going on... It's like I constantly have to explain something about myself or have to prove something, I have to dig up stuff about my past ... I think it is tough.'

(Undertaker, Funeral Company, private sector)

More employees with recognised claims (26.5%) than employees with rejected claims (9.9%) felt that the claim process had hindered or delayed their return to the labour market. Within 2–4 years after the notification, 23.2% of employees who completed the questionnaires were still employed at the same workplace, while 39.2% were unemployed. There was a significant difference between the diagnostic groups and most employees with PTSD and depression were unemployed.

5.3.1. Summary: Study III

Prevention in the work environment was an aim of many workers' compensation claims. However, the employees experienced an individualised focus in the workplace and WCS, where there

were more focus on whether they had a personal problem than on the problematic work environment. Changes in the work environment and workplace inspections were rare; stakeholders such as health-and-safety or union representatives were often uninvolved. When they did get involved, this was not necessarily a positive experience for employees with WRMD. Compared to employees with rejected claims, depression, or stress, employees with recognised claims and/or PTSD tended to have more positive experiences. The compensation process could be demanding and compensation schemes were hard to fill out. 17.7% of participants reported that the claim process had hindered or delayed their RTW. Most employees with PTSD or depression were unemployed 2–4 years after the notification, compared to employees with stress related sickness.

5.4. Study IV.

Is the notification of an occupational mental disorder associated with changes in health, income, or long-term sickness absence?

Changes over time were significant for all outcomes: in particular, a decline was observed in GP visits (HR 0.83 [95% CI: 0.80–0.86]), prescriptions of psychotropic drugs (OR 0.48 [95% CI: 0.35–0.67]), and long-term sickness absence (OR 0.11 [95% CI: 0.07–0.17]) and annual income (OR 3.89 [95% CI: 2.87–5.26]) from baseline to follow-up.

No significant prospective associations between notification status and the four outcomes were found in the model adjusted for time only (GP visits: HR 0.96, 95% CI: 0.92–1.00; prescriptions of psychotropic drugs: OR 1.09, 95% CI: 0.52–2.28; low annual income; OR 1.84, 95% CI: 0.96–3.52; high sickness absence: OR 0.49, 95% CI: 0.20–1.20). Insignificant associations were also confirmed in the model, adjusted for age, gender, occupation, and diagnosis (GP visits: HR 0.99, 95% CI: 0.92–1.07; prescriptions of psychotropic drugs: OR 1.01, 95% CI: 0.42–2.42; low annual income, OR 1.68, 95% CI: 0.83–3.42; high sickness absence: OR 0.52, 95% CI: 0.19–1.39).

5.4.1. Summary: Study IV

No association was found between WRMD notifications and health, annual income, or long-term sickness absence. A significant decrease in income was observed for patients with both notified and non-notified conditions. Specifically, the patients had an average decrease in annual income from ≤ 300.000 Dkr. to >300.000 Dkr.

6. DISCUSSION

The main findings for each study have been summarised in the Results section. Here, selected findings of the four studies are summarised and discussed:

- Challenges for Line Managers
- Physical diseases handled better than WRMD
- Stakeholder Involvement: Health and Safety—and Union Representatives
- The type of WRMD matters
- Interactions between WCS and the Workplace
 - Workplace inspections
 - Employer hearings—should we be concerned?
 - Lack of prevention in relation to WRMD
- Do the WCS harm employees? – contradicting findings
 - A comparison of Study III and Study IV
 - Study III and IV compared to other studies in the field

Methodological strengths and limitations will also be discussed.

6.1. Summarizing selected results

The thesis contributes with various views on the management, stakeholder involvement, and claim process experienced in the workplace and WCS when an employee become sick of a WRMD.

Overall, the process of facilitating RTW and implementing preventive solutions often seemed to be left entirely to line managers, who did not necessarily have access to organisational support, knowledge, or room for action. The workplaces lacked systematic procedures for supporting employees with WRMD; despite acknowledging the problematic working conditions, line managers focused on the sick employees themselves, attributing the illness to their own behaviour and personal circumstances. Workplace stakeholders, including health-and-safety and union representatives, were rarely involved. When health-and-safety representatives did become involved, the employees tended to experience their input as negative rather than positive. The involvement of union representatives was generally experienced as positive. Workplaces were better at handling work-related physical diseases than WRMD. Workplace experiences may also depend on the type

of WRMD; for example, more employees with PTSD had positive experiences in the workplace than employees with work-related depression or stress. Finally, a workers compensation claim of a WRMD seldom resulted in an inspection from the Working Environmental Authority. Many employees felt that they were not adequately informed about the workers' compensation process; they found the compensation schemes difficult to fill out. To the question on whether worker compensation claims can harm employees with WRMD, this thesis presents contrasting findings. In Study III, employees reported that the WCS process had hindered or delayed their RTW; by contrast, Study IV found no association between notifications and health, annual income, or long-term sickness absence. This question will be discussed later.

6.2. Challenges for line managers

Line managers have been identified as the main stakeholders responsible for the RTW of sick-listed employees [102–104]. However, Study I confirms the findings of earlier research, which has shown that managers may lack the knowledge and organisational support to effectively manage the RTW process [102–104]. Managers may feel poorly prepared and isolated, due to a lack of training and support [105]. Studies have also found that managers focus on stress as an individual problem; this attitude can be a barrier to preventive initiatives in the work environment [106]. Sharley and Gardner [107] have found that a fear of seeming responsible for work-related stress can inhibit managers from initiating stress management interventions. A focus on personality or individual life circumstances as causes of stress can point towards solutions aimed at helping the individual employee, such as psychological counselling (tertiary interventions). However, tertiary interventions have been criticised for not being particularly effective for reducing workplace stress, since they tend not to have favourable impact on the organisational level [108]. Thus individual focused interventions should not occur alone [109,110]. Studies have also shown that most workplace efforts focus on the early phase of RTW, while interventions in the working environment and efforts to adapt working conditions for sick employees appear less formalised and coordinated [41,43]. The individual focus and lack of preventive initiatives in the work environment may hinder the RTW, since employees with mental disorders are often reluctant to return, if they think that the working conditions that led to the disorder have not improved [47].

Main points

Managers who focus on their employees' personal circumstances, as discussed above, and fail to implement preventative initiatives in the work environment, may undermine the RTW of employees with WRMD, as well as efforts to address psychosocial risks in the workplace. Organisations should therefore provide support by minimising cross-pressure and insuring that line managers who handle the RTW process have an adequate level of knowledge, access to professional guidance, and room for action. Finally, a shared, formal understanding of work-related stress and other WRMDs should be emphasised in the workplace.

6.3. Physical diseases handled better than WRMD

One conclusion of Study II was that workplaces are best at handling work-related skin diseases. Employees with low-back pain tend to have more positive experiences than employees with WRMD. The findings of this study are in line with those of other studies, which have concluded that work-related diseases are handled differently in workplaces depending on whether they involve physical or mental health [44,46]. Employers have been shown to be more critical of employees with mental disorders and their ability to work than of employees with physical diseases [46]. Workplace support and efforts for employees with physical diseases also appear to be better than those offered to employees with mental diseases [44]. More employees with physical work-related disease reported that their work-related disease and workers' compensation claim resulted in changes to the working environment (ref: Study II). It is not surprising that there are differences between the experiences of employees with WRMD and those with physical work-related diseases, an EU-OSHA rapport in 2012 concluded that: *'The management of psychosocial risks in European establishments appears to lag behind the management of general Occupational Safety and Health risks'*[111].

Main points

Management and stakeholder involvement vary and most workplaces are better at handling physical work-related diseases than WRMD. The more systematic approach to assessing environmental hazards after a physical injury in the workplace could provide inspiration for ways to prevent psychosocial hazards, an argument that will be discussed in more detail in 8.1.

Practical Implications.

6.4. Stakeholder involvement—Health and Safety—and Union Representatives

Study II and III have found that health-and-safety representatives was often not involved, when an employee had a WRMD. One explanation may be found in Study I, where managers perceived the sick-listing of an employee due to work-related stress as a private matter that should be handled by the employee and his or her manager. The lack of involvement of health-and-safety representatives supports one of the main findings of this thesis: that information related to the causes of WRMD is not used systematically to support the health-and-safety work of organisations. The lack of stakeholder involvement is a problem because it is essential for the sick employee (and his or her future RTW) for the disorder to be recognised and accepted, enabling the employee to experience the disorder as legitimate and receive social support [49]. Employee representatives, such as health-and-safety and union representatives, can play an important role in mobilising social support and help from colleagues. However, in cases where health-and-safety representatives were involved, more employees experienced this negatively. A Danish article suggests that the educational level of health-and-safety representatives in Denmark, may be rather low or varying when it comes to the psychosocial work environment [112]. A low level of competence may explain why some employees with WRMDs experience these stakeholders negatively. Other studies have pointed out that health-and-safety representatives may have limited influence in organisations, due to insufficient power and the failure to integrate health-and-safety work into line management decision-making [113,114]. Research also suggests that health-and-safety representatives face significant challenges specifically in relation to psychosocial risks in the work environment, due to political, financial, and regulatory changes that favour the individualisation of responsibility and the marginalisation of collectivism, which includes issues involving psycho social-risks [115]. An increased focus on the health benefits of work and an individual approach to WRMD, while largely ignoring organisational causes, reinforces the problems associated with this movement [115].

Study II and III have found that union representatives are sometimes involved and that this stakeholder can be experienced both positively and negatively by employees. One challenge faced by union representatives in relation to WRMD is that conversations between employees and union representatives are often covered by confidentiality; this stakeholder is not necessarily involved or educated in health-and-safety work in organisations. Thus there is a risk that important information about psycho-social risk factors leading to WRMD will not be accessed or used by the organisation.

Main points

The involvement of stakeholders in the workplace is therefore important in supporting the RTW of employees with WRMD. However, such stakeholders need a high level of competence, coordinated information, and a systematic approach to accessing information on the psychosocial hazards that lead to WRMD. They must apply this information to preventive actions at the appropriate organisational levels.

6.5. The type of WRMD matters

Study III has shown that employees with PTSD experience management and stakeholder involvement more positively than employees with depression or stress related sickness. To my knowledge, this comparison has not been made before. One can therefore only suggest possible explanations for this difference. One explanation may relate to inherent differences in the nature of the exposure that leads to various diagnoses.

PTSD (F43.1) following ICD 10:

'Arises as a delayed or protracted response to a stressful event or situation (of either brief or long duration) of an exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone.' [116]

The exposure that results in PTSD is often possible to assess objectively. In this, it may resemble the types of exposure that cause some physical diseases or accidents. It is therefore different from adjustment disorders (F43.2) which, according to the ICD10 criteria, occur when an individual is unable to adjust to or cope with a particular source of stress or major life event caused by outside stressors; such conditions often develop over a longer period of time/exposure [116]. It is therefore more difficult to identify the precise causes of adjustment disorders, due to the variability of psychosocial risks and the interactions between them [19,117].

Disputes about responsibility and who is at fault may exist to a greater extent in relation to work-related depression or stress, as opposed to PTSD. The dynamics identified in Study I, where managers shifted the focus to the personal circumstances of sick-listed employees, may reinforce

disagreements about the causes of work-related stress. Another reason why employees with PTSD have more positive experiences in the workplace could relate to organisational factors. PTSD may evoke more organisational support, knowledge, and perhaps less stigma. It may be a more socially accepted disorder, associated with tough working conditions, such as experiencing a fatal attack during military deployment or being physically assaulted at work.

Furthermore, employees with PTSD are often employed in organisations like the military or police, with access to organisational support systems that provide debriefing and psychological counselling. Some employees with PTSD are veterans, who, in Denmark, have access to a comprehensive support system that includes specialised treatment facilities and support for workers' compensation claims.

Main points

It can therefore be concluded that organisational systems, support from line managers, and the social acceptance of the WRMD may be better for employees with PTSD than for those who experience work-related stress or depression.

6.6. Interaction between the WCS and Workplace

The Arena of Work Disability by Loisel and colleagues [36] (For more information 2.3. *WRMD in the Workplace and WCS*) illustrates the way in which the Legislative/Insurance System and the Workplace System can interact on several levels. The background section identifies three possible ways in which worker compensation claims can have a direct impact on the workplace: *by eliciting a workplace inspection; through an employer hearing; and finally, by providing financial incentives, such as insurance rates, in relation to particular claims.* The last options will be discussed more broadly in relation to the *lack of prevention in relation to WRMD.* These themes will be discussed in relation to the findings of this thesis and other research in the field.

6.6.1. Workplace inspections

Study II and III have shown that workplace inspections are seldom conducted, following a worker's compensation claim of WRMD. Inspections are also rare in relation to work-related low back pain or skin diseases.

The findings of this thesis confirm that the Working Environmental Authority makes very limited use of workers' compensation claims for occupational diseases, as described in 2.6.1. *Inspection by the Working Environmental Authority*. Study III found that employees with WRMD can have negative experiences in relation to workplace inspections. This reflects the contrast between employee expectations (that a workers' compensation claim will elicit a workplace inspection, which will lead to a decision on the bad working conditions) and the actions taken or not taken by the Work Environmental Authority. Sick employees viewed the lack of an inspection or an inspection that did not lead to a decision as offensive—an example of the employee being treated 'as the problem' and not taken seriously, either in the workplace or in WCS.

These results are in line with the findings of a recent review, which noted that psychosocial issues are rarely well dealt with by courts or inspectorates. Inspectorates are often under-resourced, while inspectors are reluctant to enforce guidelines when there is a low likelihood of conviction [77]. In addition, the Danish Working Environmental Authority has extensive limitations on its ability to carry out inspections of the psychosocial work-environment [75], due the collective agreements and methodological limitations described earlier. This is very problematic since inspections have been shown to have an impact on organisational efforts to reduce psychosocial risks [118].

6.6.2. Employer hearings—should we be concerned?

Study I found that line managers tend to defend themselves by focusing on their employees' own responsibility. This may result in disagreements with employees about the workplace exposures that led to WRMD. In employer hearings, managers are asked to confirm or give an opinion on the exposures described in the worker's compensation claim. The managers response is sent to Labour Market Insurance and the sick employee. Thus employer hearings can escalate or harden conflicts between managers and their sick employees; managers may perceive the exposures described in the claim as an accusation. The potentially defensive responses of the managers may likewise be experienced negatively by employees. Thus, employer hearings may make the relationship between a manager and employee more adversarial, affecting the level of managerial support provided to sick employees wishing to RTW. Since manager support is essential for RTW [42,47,49], this is

highly problematic. Thus, the employer hearings that constitute part of a workers' compensation claim process may inhibit RTW for employees with WRMD.

In addition, legal considerations may make managers unwilling to confirm psychosocial exposures, since confirmation could be used in a civil lawsuit against the employer. A non-confirming response from a manager may be experienced as a lack of managerial support and demotivate the employee from wishing to RTW. The credibility and consequences of employer hearings, as part of the evidence in a workers' compensation claim, as well as the ethical considerations relating to the lack of anonymity both ways (claim exposures sent to managers and the manager's response sent to the employee) is highly relevant to consider.

Since employer hearings are part of a claim, an employee who files a workers' compensation claim is not given the opportunity to opt out of this procedure, if he or she wants the claim to be processed. There is therefore a risk that the Danish employer hearing procedures contribute to the underreporting of WRMD. Several studies have found an underreporting of WRMD in WCS [7,119,120] and have suggested that it may be caused by employees reluctance to file claims because of the fear of stigma and blame associated with these claims from the surroundings [7,119,120]. Thus, the fear of reprisals undermining an already vulnerable position (being sick and hoping to RTW) may prevent some employees from filing a compensation claim.

6.6.3. Lack of prevention in relation to WRMD

This thesis has found a lack of systematic assessment and prevention in Danish workplaces when an employee develops a WRMD. Possible explanations the fact that WRMDs rarely lead to changes in the working environment include the following: the lack of knowledge, organisational support, and room for action (ref: Study I), a focus on the individuals' personal problems instead of the working environment (ref: Study I), a lack of stakeholder involvement (ref. Study I, II, III), and a lack of workplace inspections (ref: Study II, III). These findings are in line with the World Health Organisation has reported that European workplaces show a lack of awareness of psychosocial risks and an inability to deal with them [121]. Despite a growing number of initiatives and studies targeting psychosocial risk management in Europe, these initiatives have not led to the expected results [111].

One explanation for the lack of prevention in work-environment in relation to WRMD, may be a lack of financial inducements to encourage employers to prevent WRMDs. As described in 2.6.3. *Economic incentives in relation to workers' compensation claims*, the full costs of a WRMD are not paid by the employer. The insurance rates covering occupational diseases are determined by industry, not individual employers level of prevention. Andersen (2017) has argued that Danish legislation has not created enough incentives for Danish employers to prioritise health-and-safety in the psychosocial work environment and prevent WRMDs [34].

Main points

There is a need to strengthen interactions between the legislative/insurance and workplace systems, enabling them to use information about psychosocial risks more systematically to prevent WRMDs. Workers' compensation claims of WRMD are a valuable source of information to include in workplace assessments and they could be used much more extensively by the Work Environmental Authority for preventive purposes. Additionally employees with WRMD could be given the option of opting out of employer hearings in relation to workers compensation claims, to prevent adverse effects of the hearing and potential under-reporting of WRMD.

6.7. Does the WCS harm employees?—contradicting findings

The follow-up register Study IV showed no association between the health outcomes, annual income, and notification status of employees with WRMD. This result contrasts with most findings in the Danish context [6,63] and international context, [64,65,122] which show that workers' compensation claims have various negative effects. Study III has also found that, for 17.7% of notified employees, making a workers' compensation claim hindered or delayed RTW. The following section provides possible explanations for the different findings of Study III and IV, which to my knowledge, are the only studies to use large samples of employees with workers' compensation claims for WRMD. The studies will then be discussed in relation to other research in the field.

6.7.1. A comparison of Study III and Study IV

Although Study IV used a potentially representative sample, decisions about the workers' compensation claims were not included in the study. If the population was representative, this

would mean that the claims of most notified employees would be rejected, since the recognition rate in 2010 was 4.9%. The mean processing time for rejected claims is much shorter than the time needed to process recognised claims; thus, for most employees with rejected claims, the time during which they are ‘exposed’ to the WCS is rather short [123,124]. By contrast, Study III had an overrepresentation of employees with recognised claims; 51% of the employees with depression and 34.3% of those with stress-related disorders had their claims recognised. Depression and stress are not included in the List of Occupational Diseases; in 2010–2013, these claims would have been assessed extensively and the compensation process could have included employer hearings and psychiatric/medical assessments, as well as the possible involvement of lawyers. Medical assessments have been identified as a potentially harmful factor in workers’ compensation processes [64,69,122,125] because they e.g. exacerbate trauma by over-investigating patients. Lawyer involvement is also negatively associated with claimants’ well-being [126], although the reasons for this finding have not been fully assessed [126]. More of the employees in Study III may therefore have gone through a long and demanding claims process. This hypothesis is supported by the fact that 26.5% of employees who reported that their claims had delayed or hindered their RTW had recognised claims; by contrast, only 9.9% of employees reported that their claims had interfered with RTW had rejected claims.

In additional, the follow-up times differed between the two studies. In Study IV, the follow-up took place one year after the medical examination. In Study III, responses were gathered 2–4 years after the notification. It is possible that the negative effects of the workers’ compensation process take more than one year to develop e.g. one study has shown that a processing time exceeding one year for compensation claims after accidents is associated with increased trauma [127]. Finally, these contradictory findings may be explained by the difference between the self-reported exposure and symptoms reported in Study III and the registered data analysed in Study IV. Other research has suggested that register studies may be more conservative in their findings, when compared to self-reported data [128,129].

6.7.2. Study III and IV compared to other studies in the field

A body of reviews have concluded that compensation claims and compensation are bad for health. Murgatroyd et al. [64] have carried out a systematic review, including 29 papers on the effect of financial compensation on the health outcomes of employees with musculoskeletal injuries. They

have concluded that there is strong evidence for an association between compensation status and reduced psychological function; there is moderate evidence of an association between compensation and reduced physical functioning. Harris et al 2005 have conducted a meta-analysis on the association between compensation and outcome after surgery in 211 papers; they have concluded that compensation is associated with a poor outcome after surgery [122]. Finally, Elbers et al. 2013 have conducted a meta-analysis of 10 studies on the compensation process and mental health outcomes, following different types of injuries. They concluded that being involved in compensation claims is associated with increased mental health complaints [65].

Methodological differences

Some studies in the field have been heavily criticised for their low-quality study designs and heterogeneity [65,126]. As reviews have been criticised for drawing conclusions about the detrimental impact of notifications on employees' health, based on patient groups that were not comparable at baseline [66], concluding that the results should be interpreted with caution [65,126].

The analysis in Study IV took into account the participants' baseline conditions, assessing changes in outcomes after they entered the workers' compensation system. This may be one explanation for the fact that Study IV found no association between notification and health-related outcomes, in contrast to most studies in the field. Another difference between Study IV and related research on the negative consequences of workers' compensation claims, is that most previous studies have been carried out in North America or Australia, where access to public health insurance to replace wages lost during sick leave may be unavailable or minimal [130]. In Denmark, an employee can access some benefits, health care, and support for RTW without an approved compensation claim. No-fault systems and non-profit insurance agents has are found to be perceived more positively than fault-based systems and profit-oriented insurers [131]. In Denmark, the WCS is a no-fault system that uses a non-profit insurance agency to process workers compensation claims of occupational disorders. This may partly explain why Study IV found no association between notifications and health-related outcomes. By contrast, Study III found that employees felt that the workers' compensation process negatively affected their RTW; however, Study III did not use a representative sample.

Main points

The thesis findings contradict each other in explaining the extent to which workers' compensation claims are bad for employees. Study III shows that many employees do not feel sufficiently informed about the compensation process and find the compensation schemes difficult to fill out and report that the workers' compensation process hindered or delayed their RTW. By contrast, Study IV found no association between notification status and health, annual income, or long-term sickness absence. The findings of Study IV conclude that employees with mental disorders should not be advised against filing a compensation claim because of concerns about the negative impact of the claim process on their health. Nevertheless, Study III suggests that the WCS may be problematic for employees undergoing an extensive compensation process. The practical implications of these studies in relation to workers compensation claims of WRMD in a Danish context will be further discussed in under Practical implications 8.1.2. *To notify or not to notify.*

6.8. Strengths and limitations

6.8.1. Strengths

The population of employees with WRMD has seldom been explored to discover experiences of the workplace and WCS. Study III and IV are, to my knowledge, the first studies worldwide to explore large samples of employees with notified WRMD in relation to their workplaces and workers' compensation claims. This may reflect the fact that Denmark is the first European country to add an occupational mental disorder to its List of Occupational Diseases; for several years, many notified WRMD have been notified in the WCS [5]. It is likely that findings presented in this thesis will be relevant to other countries progressively moving toward handling more mental health claims [19] and reducing the growing numbers of WRMDs [132]. In addition, a growing body of evidence in the field is connecting work environmental risks with the development of mental disorders [10], this may result in more claims being filed and recognised in the future.

The various methodological approaches, including qualitative interviews, surveys, and a register analysis [133], shed light on the topic from different perspectives and provide insights into the dynamics and the extent of potential problems. Finally, they provide information about areas that

could be improved for employees with WRMD in relation to workplace management and the WCS process.

6.8.2. Limitations

Manager interviews

In Study I, managers were recruited through their sick-listed employees. When comparing the scores given by employees for the psychosocial work environment at their workplaces (scored in COPSOQ) [88], a significant difference was found between the scores given by employees who referred their managers for interview and those who did not refer their managers, in the measure of 'vertical trust' (trust between management and employees) [88]. Employees who referred their managers had higher levels of education, had been sick-listed longer, and were more likely to RTW at the end of treatment than employees who did not refer their managers. Seing et al. [134] have found that organisational responses to sick-listed workers are primarily characterised by an economic perspective; whether it is profitable to retain the employee depends on the employee's competencies and value to the organisation. Thus, the participating managers may be the managers of rather 'valuable' employees. It is likely that the findings would be different if the interviews had been with managers of 'unskilled', temporary, or seasonal workers. Here RTW may be less of a priority since the employees cost less to hire and are relatively easy to replace.

Development of the questionnaire

The questionnaires used in Study II and III were developed through an explorative sequential mixed method design [133]. Starting out with exploratory interviews and the results of those interviews, the questionnaires did not consist of previously validated questions. No scale validation was conducted, as the responses to the questionnaires were treated descriptively, item by item. A pilot test [135] was carried out before distributing the questionnaires to ensure that they were easy to understand and would be interpreted correctly. Neutral response categories were included, as well as the option of not answering questions or responding 'don't know/ can't remember/or other answers' when relevant [136]. In addition, open-ended questions were included to allow the employees to provide additional information [137].

Response rate and reporting bias

The response rate to the questionnaire survey of employees with WRMD was 60.5%; for employees with low back pain it was 50.5%, and for employees with skin diseases, it was 33%. The response rate may reflect the significance of getting sick and filing a workers' compensation claim. The findings can therefore be more pronounced in both positive and negative directions. Likewise, the distribution of employees with recognised occupational mental disorders was 46.8%; the distribution of employees with low back pain was 55%. These recognition rates are much higher than the real distribution (the recognition rate for mental disorders was 4.1%; that for low back pain was 13.8% in 2016) [5]. Since employees with recognised claims more often report changes in the working environment, one can imagine that the results of the study would show even fewer preventive initiatives in a representative sample of workplaces.

Study II and III relies primarily on self-reported questionnaire data, reported 2–4 years after the notification; this may increase the risk of reporting bias [138,139]. In addition, many participants had bad self-reported health at the time they completed the questionnaire, which might reinforce potential reporting bias [129,138]. A dropout analysis and an additional analysis of potential confounders (including gender, age group, educational level, industry, and self-reported health at the time of response) were carried out (ref: Study III). These analyses did find differences in the questionnaire responses; however, most of the differences could be attributed to the distribution of attributes such as age and gender in a diagnostic group in which more men and police/jail/defence employees had PTSD, while more women had stress related disorders. The differences in the answers of employees with good and bad self-reported health were seldom significant, indicating limited reporting bias in relation to current health status (APPENDIX 6).

Limitations in Study IV outcomes

For Study IV, the outcomes were proxy measures for disease severity; no information was available on the difficulties and feelings experienced by participants. The number of GP visits at baseline could reflect severity but could also show that employees visit the GP more the first year of the onset of a WRMD. Other measures, such as 'visits to psychiatrists', 'visits to psychologists' and 'prescribed painkillers' were considered, but the registered data were biased for all outcomes. In other words, notified employees were more likely than non-notified employees to be referred for psychiatric assessment as part of the claim process. Access to psychologists through the public

health-care system is very limited; it depends on the specific diagnosis. No register gathers the total number of psychologist visits paid for by private/company insurance policies. Finally, the regulations for prescribing painkillers changed in 2013, creating a large increase in the number of prescriptions in 2013 and beyond.

Both income and sickness absence are influenced by employment status and employment grade. We have, however, no valid follow-up information on employment status. It is not possible to verify whether the unemployment rate was higher in the notified group, which could have affected the results with regards to these two outcomes. Additionally other confounders could have been included but the potential confounders were chosen at the beginning of the project, as known risk factors for mental health, based on previous evidence (gender, age, diagnosis, occupation).

One challenge in Study IV is the fact that more notified than non-notified employees had a PTSD diagnosis. One could argue that PTSD is a more severe condition, with a poorer prognosis than depression or stress-related illness; however, adjusting for the diagnosis did not change the findings. Health differences due to diagnosis would perhaps be more pronounced given a longer follow-up period; this point is considered in 8.2. *Implications for future research.*

Are the findings still relevant?

The manager interviews analysed in Study I were collected in 2011–2012. The employees who completed the questionnaires used in Study II and III had a work-related disease notified in 2010–2012. Thus, one may wonder whether these findings are still relevant in 2018. In the case of the manager interviews, the results have been presented in many contexts to different audiences, including workplaces, work-psychologists, unions, and health-and-safety and union representatives. Participants have confirmed the findings, time after time. In addition, a 2016 Danish report has reported some of the same findings, including line managers struggling with the RTW process of sick-listed employees with mental health problems [140]. Although more guiding materials for managers have been published in the meantime, the problems described in Study I properly still exists. In the case of the questionnaire responses, employees who filed workers' compensation claims in 2014 were interviewed for the project (ref: Study III) and some were interviewed several times thereafter. These interviews did not contradict the findings from the questionnaires.

7. CONCLUSIONS

Study I

When an employee develops a WRMD, his or her line managers acknowledge problems in the work environment but may turn the focus toward the employees circumstances. The lack of a common understanding of stress creates room for this shift in focus. Line managers experienced cross-pressure, discrepancies between strategic and relational considerations, and a lack of organisational support during the RTW process. Organisational support, guidelines, knowledge and good communication were found to be essential for RTW.

Study II

It is more common for employees who is sick from a WRMD than for those with work-related low back pain or skin diseases to have a negative experience of workplace management, encounter a lack of prevention in the work environment, have negative experiences with workplace stakeholders (managers and health-and-safety representatives), and resume work too early. Many employees are unemployed 2–4 years after notification.

Study III

Prevention in the work environment was an aim behind workers compensation claims of an WRMD, but employees with a WRMD experienced an individual focus in the workplace and WCS. Managers were often experienced negatively, while health-and-safety and union representatives were often not involved. Changes in the work environment and workplace inspections were rare; many employees received inadequate information in the WCS and found compensation schemes difficult to fill out. More employees with recognised claims and/or PTSD had positive experiences in the workplace, in comparison to employees with depression or stress-related sickness. However, workers' compensation claims could be an obstacle for RTW, especially for employees with recognised claims.

Study IV

No association between notifications of an occupational mental disorder and changes in health, income, or long-term sickness absence was found one year after the initial medical examination. A significant decrease in income was observed among employees with both notified and non-notified mental disorders

Organisations should support line managers by minimising cross-pressure and insuring an adequate level of knowledge, access to professional guidance, and room for action when handling the RTW process. A common and formal understanding of work-related stress and other WRMDs should be emphasised in the workplace. The involvement of workplace stakeholders has an important impact on the RTW of employees with WRMD; however, a high level of competence, the coordination of information, and a systematic approach to accessing information about the extent to which psychosocial risks lead to WRMD are to underpin preventive initiatives at all relevant organisational levels.

This thesis arrived at contradictory findings on the question of whether workers' compensation claims had a negative impact on the health of employees. Study III revealed that many employees did not feel sufficiently informed about the compensation process and found the compensation schemes hard to fill out. In addition, many employees with recognised claims reported that the compensation process had hindered or delayed their RTW. However, no association between notification status and health related outcomes or annual income was found in the one-year follow-up register study (Study IV). This points to the conclusion that employees with mental disorders should not be advised against filing compensation claims because of concerns about the negative impact that the claim process may have on their health status. Still, the WCS may be problematic for employees going through an extensive compensation process.

Finally, there seems to be a need to strengthen the interactions between the legislative/insurance system and the workplace system if we want to use information about preventing psychosocial risks effectively. Workers' compensation claims of WRMD provide a valuable source of information to underpin workplace assessments and could be used much more extensively by the Work Environmental Authority for preventive purposes. Finally, there is room for improvement in the WCS and employees with WRMDs should be allowed to opt employer hearings when filing worker's compensation claims.

8. IMPLICATIONS OF THE THESIS

8.1. Practical implications

In the following section the practical implications of these thesis findings is reflected on —first in relation to a risk management model that could target psychosocial hazards, as a possible remedy to the lack of preventive initiatives discussed above. This section also includes the pros and cons of keeping workers' compensation claims of WRMD (not on the List of Occupational Diseases) in the WCS and suggests ways to improve the Danish WCS.

8.1.1. Risk management model targeting psychosocial hazards

This thesis identified a lack of a systematic approach to psychosocial risks. A possible solution may involve applying a concrete model of risk management that targets psychosocial risks, ensuring a systematic approach in the workplace. EU-OSHA has proposed a model that consists of a risk assessment, a translation of the risk information into targeted actions, the introduction and management of risk-reduction interventions, an evaluation of the interventions, and feedback on existing interventions and future plans for action [111]. This approach has been recommended by a number of influential organisations in Europe, including HSE in Great Britain, INRS and ANARCT in France, and EU-Osha 2002 [111]. This thesis notes that workers' compensation claims of WRMD could be a valuable part of this model. A workers' compensation claim can be the one factor that elicits a risk assessment in the workplace. Difficulties in applying the risk management paradigm to psychosocial work environments have been identified [117]; however, it still appears to be more effective than other workplace interventions, which often aim at individual level changes. It has been shown that greater skills and training could enable adequate risk assessments of psychosocial hazards [141]. However, it is important that strategies be tailored to specific national contexts. In particular, small and medium-sized companies need external support and help from competent actors to develop supportive infrastructures [132].

8.1.2. To notify or not to notify?

Currently, cases of PTSD and depression that begin shortly after exposure and/or situations of an exceptionally threatening or catastrophic nature (of shorter and longer duration) are included on the List of Occupational Diseases. Other claims are rejected in the majority of cases. It is contradictory that the legislation obliges physicians to notify on the suspicion that a

diseases has been caused by an individual's working conditions to a compensation system that rejects e.g. stress-related illness and requires a permanent disability to grant compensation. Thus, it may be relevant to consider whether mental disorders such as adjustment disorders, should be notified at all, given the low recognition rate of 4.1% in 2016 and the fact that workers' compensation claims seldom result in inspections from the Working Environmental Authority [76].

One argument for keeping notifications of WRMD that are not on the List of Occupational Diseases in the WCS is the fact that research connecting psychosocial hazards to mental disorders is still evolving. A claim can be resubmitted if procedures/knowledge in the field develop and Denmark has one of the world's most generous WCS when a disease is recognised to have caused a work disability. Another argument is that workers' compensation claims constitute an important statistical measure. The statistics related to workers' compensation claims are the only form of national surveillance in Denmark of work-related diseases; they attract political attention and support strategic decisions about preventive actions that target risks in the work environment across industries.

To maintain and perhaps strengthen the surveillance of this field, while saving the time and resources of sick employees and WCS costs, one suggestion is to offer the possibility to make a registration of diseases that could be work-related, without raising an insurance claim in the case of disorders that are currently not recognised because they are not chronic. In Study III, an important motivation for making a claim was 'to register the disease as a precaution in case it gets worse later'. Separating the simple act of registering a disease from the notification process used to claim compensation could save time and resources, both for sick employees and for the WCS. Registration claims could be sent to the Danish Work Environment Authority and contribute to the statistics, perhaps leading to a more precise form of statistical surveillance of the development of work-related diseases.

The thesis also notes that the Work Environmental Authority could make better use of the claims, as described in Study III. Many WRMD claims, like accident reports, contain important information about the current psychosocial hazards in Danish workplaces. There may also be a need to make the WCS more transparent, sharing the system's aims, processes, and limitations, so that

employees who file compensation claims will have a realistic view of how the system works and what they can expect from it. Finally, there is a need to adjust the procedures in the WCS to better fit mental disorders, including the assessments in the compensation schemes, procedures for collecting evidence e.g. employer hearings and approach to the use of witnesses as well as the scientific basis which could include more clinical psychological research and methods for assessment. Additionally it is worth considering whether employer hearings are necessary and provide the right information, given the challenges described in this thesis. In cases of claims of work-related depression or stress, there is a risk that the hearing itself could have an adverse effect on the relationship between the employer and employee. Employees could be offered the chance to opt out of employer hearings. Other techniques, such as the use of witnesses or organisational documents, could be used instead. It is, however, important to consider which methods can be used to question workplace witnesses, since employees may be caught in conflicts of loyalty or interpersonal conflicts. Currently, witnesses are not protected by anonymity.

8.2. Implications for future research

A qualitative longitudinal study that follows employees with WRMDs through the sick-leave and RTW processes and the various phases of the workers' compensation process could provide valuable insights into health-promoting and -inhibiting aspects of the process, from developing a WRMD to either returning or exiting the labour market. Such a study could suggest ways to improve workplace management and the WCS and provide information about crucial moments, when it would be most beneficial and perhaps cost effective to intervene or not to intervene for employee with a WRMD. It could be valuable to explore other systems and processes that sick employees with WRMDs must undergo, including the Danish sickness benefit system, various interactions between municipalities and other stakeholders, access to appropriate treatment, and labour market possibilities/obstacles after a WRMD. A longitudinal register study, with a follow-up time of perhaps 3- 5 -7 years could further examine the extent to which workers' compensation claims are associated with adverse health and labour market outcomes. To avoid methodological problems related to the different diagnostic prognoses of employees with notified and non-notified conditions, researchers could match groups using different characteristics, such as diagnosis, severity, and prior workplace exposure. Register databases, such as DREAM, which contains

weekly information on the sickness absence compensation of Danish citizens, and other measures could be used to build a detailed and valuable overview of employees' process in and out of the labour market. Finally, research on implementing a systematic risk assessment model to target psychosocial hazards and ways to incorporate valuable information on employees with WRMDs into this systematic approach would be highly relevant.

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APPENDIX 1. PAPER I

Ladegaard Yun, Skakon Janne, Elrond Andreas Friis, Netterstrøm Bo

How do line managers experience and handle the return to work of employees on sick leave due to work-related stress? A one-year follow-up study

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How do line managers experience and handle the return to work of employees on sick leave due to work-related stress? A one-year follow-up study

Yun Ladegaard^a, Janne Skakon^a, Andreas Friis Elrond^{a,b} and Bo Netterstrøm^c

^aDepartment of Psychology, University of Copenhagen, Copenhagen, Denmark; ^bResearch and Knowledge Centre, The Danish Veteran Centre, Ringsted, Denmark; ^cDepartment of Occupational and Environmental Medicine, Bispebjerg University Hospital, Copenhagen, Denmark

ABSTRACT

Purpose: To examine how line managers experience and manage the return to work process of employees on sick leave due to work-related stress and to identify supportive and inhibiting factors.

Materials and methods: Semi-structured interviews with 15 line managers who have had employees on sick leave due to work-related stress. The grounded theory approach was employed.

Results: Even though managers may accept the overall concept of work-related stress, they focus on personality and individual circumstances when an employee is sick-listed due to work-related stress. The lack of a common understanding of stress creates room for this focus. Line managers experience cross-pressure, discrepancies between strategic and human-relationship perspectives and a lack of organizational support in the return to work process.

Conclusion: Organizations should aim to provide support for line managers. Research-based knowledge and guidelines on work-related stress and return to work process are essential, as is the involvement of coworkers. A commonly accepted definition of stress and a systematic risk assessment is also important. Cross-pressure on line managers should be minimized and room for adequate preventive actions should be provided as such an approach could support both the return to work process and the implementation of important interventions in the work environment.

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► IMPLICATION FOR REHABILITATION

- Organizations should aim to provide support for line managers handling the return to work process.
- Cross-pressure on line managers should be minimized and adequate preventive actions should be provided in relation to the return to work process.
- Research-based knowledge and guidelines on work-related stress and return to work are essential.
- A common and formal definition of stress should be emphasized in the workplace.

Introduction

Long-term absences from work due to stress is an increasing problem in many countries [1]. Research in this area often includes common mental disorders, such as depression, adjustment disorders and anxiety [1–6]. Furthermore, prolonged stress may have serious implications on the employee's health, quality of life and attachment to the labor market, absences due to long-term stress-related sickness represent a major risk factor for early withdrawal from the labor market [7,8]. Additionally, politicians, companies and researchers are aware of the serious economic consequences that result from such absences. For example, common mental disorders represent an increasing percentage of claims for disability benefits [9,10]. In Denmark, although the government has defined sickness absence as a focus area [11], there has been no coordinated national intervention, such as the United Kingdom's management standards, to address the problem [12]. Nevertheless, Danish companies pay close attention to sickness absence and approximately 92% have formulated a sickness absence policy. However, less than half of the companies apply specific initiatives, such as adjusting work conditions, establishing

ongoing dialog with those on leave, providing part-time sick leave, counseling and offering referral for treatment [13]. It is not apparent how they manage employees on sick leave due to mental health problems [10,14]. Research suggests that the return to work (RTW) process is highly complex [15] and includes multiple stakeholders [16]. Among the studies, Pomaki, et al. [17] conducted a literature review on workplace-based interventions for employees with mental health problems, which emphasized on the importance of a workplace-based approach. Hoefsmit et al. [18] also conducted a review of RTW interventions and found that the interventions for employees with mental health problems differ from those for employees with physical health problems, as it may not be beneficial for employees with mental health problems to follow the predefined time schedules ascribed in conventional RTW programs. These findings are supported by Andersen et al. [4], who studied how workers with mental health disorders experience multidisciplinary RTW interventions and concluded that individual consideration combined with greater focus on the working context is essential during the RTW process. Finally, while the importance of a focus on the RTW process is addressed in several studies [6,19,20], the need for greater emphasis on the role of the

Table 1. Background information on interviewed managers and their sick-listed employees.

LINE MANAGERS							SICK LISTED EMPLOYEES				
Manager ID	Gender	Workplace	Years in current managerial position	Span of control*	Baseline interview	One year follow up interview	Gender	Years of vocational or higher education	Job position	Weeks of sick leave at baseline interview	Return to work
1	M	Insurance company	4	Direct	+	+	F	1–3 years	Account manager	25	Yes
2	F	Public Authority	12	Direct	+		F	<1 year	Assistant	15	No
3	F	Public hospital	1	Direct	+		F	1–3 years	Physio-therapist	15	No
4	F	IT company	2	Direct	+		M	1–3 years	IT employee	19	No
5	F	Airline	6	Distance	+		F	1–3 years	Flight attendant	31	Yes
6	F	Public kinder garden	5	Direct	+		F	1–3 years	Teacher	19	Yes
7	M	Public eldercare	4	Direct	+		M	1–3 years	Social-and health service helper	18	Yes
8	M	Pharma company	4	Direct	+	+	M	1–3 years	Retail buyer	15	Yes
9	M	Union	6	Direct	+	+	F	1–3 years	Project manager	19	No
10	M	Financial company	11	Direct	+	+	F	1–3 years	IT employee	27	Yes
11	F	Media company	15	Direct	+	+	F	1–3	Graphic designer	18	No
12	F	Fashion company	4	Direct	+		F	<1 year	Retail buyer	16	Yes
13	M	Public transportation	7	Distance	+	+	M	1–3	Train driver	48	Yes
14	F	Public hospital	8	Direct	+	+	F	1–3	Nurse	31	Unknown
15	F	IT company	12	Direct	+	+	F	1–3	IT employee	16	Yes

*Direct: geographically located at the same address as the employee. Distance :not located at the same address as the employee on a daily basis.

supervisor in facilitating job changes and the RTW process was suggested by Williams-Whitt et al. [21].

Studies have found that line managers are the most important factors in facilitating the RTW process [5,22,23]. Furthermore, studies identify various aspects of leaders' behaviors that affect the leader-employee relationship, which, in turn, ultimately affects the success of the RTW process [24]. Flach et al. [25] found that a lack of support from supervisors is associated with job loss during sick leave. That said, line managers are in a position to support workers who are absent because of common mental health problems through a combination of support, guidance and permanent or temporary changes in work tasks [22]. A wide range of leadership qualities, such as being protective, encouraging and good with problem-solving and outreach, are thus expected of managers as they act in line with legal regulations regarding RTW policies. These responsibilities, however, may conflict with other management tasks such as addressing the needs of coworkers and meeting the required goals of production [26]. Further, several studies have suggested that managers, in general, lack the knowledge and the options to handle the highly complex RTW process as it relates to absences due to work-related stress. Basic leadership behaviors, such as showing concern for and communicating with the employee with a stress-related illness, are one among the most important actions [22,27–30]. Furthermore, a critical gap between intention and actual behavior in the implementation of RTW initiatives in companies has been observed [31].

Little is known about line managers experiences or their roles in the RTW process of employees whose long-term absences are due to work-related stress (WRS). In the current study, WRS is defined as an absence due to a stress-related sickness that is primarily the result of conditions at work as assessed by a physician or psychologist.

We do know, however, from a systematic literature review of three decades of research, that managers supportive behaviors are positively correlated with low employee stress [18]. Some studies suggest that managers acknowledge work-related pressure but turn their focus to individual employees in regard to explaining why stress occurs, thereby dismissing the need for organizational interventions [32–34]. Thus, explanations of WRS and interventions to alleviate WRS are mainly based on individualized approaches [32,35], although the RTW literature suggests that facilitating the RTW demands a variety of strategies [27–29].

To reduce the human, societal and economic consequences of stress-related long-term absences, it is necessary to gain a better understanding of the facilitators and inhibitors of the RTW process. The aim of the present study is to contribute to the existing knowledge by gaining a better understanding of how line managers, act as key actors in the RTW process, experience and handle the RTW of employees who are absent due to WRS and also to explore which factors present challenges for managers during the RTW process.

Methods

The present study applies a grounded theory approach [36] based on interviews with 15 line managers [37] and one-year follow-up interviews with eight of the line managers.

Recruitment and participants

The recruitment of managers was enabled by a sibling intervention project, COPESTRESS [38], in which employees who were sick-listed by their general practitioner due to stress were assessed by a psychologist or occupational physician based on the following inclusion criteria: (1) on full- or part-time sick leave due to stress; (2) employed or self-employed; (3) displayed significant symptoms of stress for months and (4) motivated to participate. Participants were excluded from the sibling intervention project if they (1) were using alcohol or psychoactive stimulants, (2) were diagnosed with a major psychiatric disorder or (3) suffered from a significant somatic disorder assumed to be the primary cause of their stress [38]. Factors causing stress were assessed by a psychologist or occupational physician during the treatment and all employees selected for this study had experienced at least one major WRS-factor, such as high work pressure, poor management or a generally poor psychosocial working environment that significantly contributed to the sick listing. Eighty-eight percent of the employees had experienced three to four WRS-factors that contributed significantly to their sick leave [26] (for additional details, see Ladegaard et al. [39]). A total of 210 employees met the inclusion criteria, 56 of whom allowed us to contact their line managers. 36 managers agreed to participate and three dropped out. After 15 interviews, the saturation point was reached. Hence, the qualitative data from the 15 managers forms the basis of the present paper [40] (Table 1). While the remaining managers participated in a survey, whose data are presented in another paper.

Data collection

The baseline data collection was conducted in 2011. One-hour individual semi-structured interviews were conducted by a researcher at the manager's workplace, either in the managers office or in a meeting room. During the first five interviews, a second researcher attended as an observer with the informant's permission, which allowed for subsequent internal reflection and validation regarding both form and content [41].

After one year (i.e., in 2012), follow-up semi-structured interviews that lasted between 30 min and one hour were conducted with eight of the managers. The one-year follow-up provided an opportunity to inquire further into coded themes obtained from the baseline interviews register, whether the employee had returned to the workplace and record managers' reflections on the RTW process, their experiences and their actions. Furthermore, the researchers discussed the preliminary findings with the managers to strengthen the study's validity.

Analysis methodology

Interviews were digitally recorded and transcribed verbatim; all names were changed, and the recordings were then deleted. Interview transcripts and descriptive responses reported in the surveys were analyzed using principles from Constructing Grounded Theory [42] to identify key categories and codes. The first author conducted the initial open coding, which involved a sequential transcript review followed by the generation of codes that described processes, actions, thoughts and feelings. Core variables were identified that described how managers experienced and handled situations in which employees were sick-listed due to WRS. Selective coding identified the codes and concepts that were most frequently mentioned or that stood out as being significantly important and analyzes were supported by extensive memo-writing [36].

The interview guide for the baseline interviews included the following areas of interest: (1) background information about the manager; (2) manager perspectives on the causes of WRS and workplace conditions; (3) manager reflections on the prevention of WRS in general working environments; (4) manager experiences in handling situations in which employees were sick-listed due to WRS; (5) manager experiences with the RTW process and their thoughts and feelings regarding the process; (6) manager reflections on organizational supportive and inhibiting factors with respect to facilitating the RTW process for employees with WRS and (7) manager reflections on the challenges and dilemmas associated with WRS and the associated RTW process. The interview guide for the one-year follow-up interviews included: (1) events and occurrences in the workplace since the last interview; (2) the RTW status of the employee and (3) dialog regarding the preliminary findings/hypotheses. The follow-up interviews were primarily used to inquire further into the coded themes from baseline interviews and to register whether the employee had returned to the workplace. Accordingly, the result section is based primarily on the baseline interview data.

Ethical considerations

The managers and employees were informed of ethical formalities, such as voluntary participation and confidentiality, after which they signed consent forms. Contact information was provided and participants were encouraged to contact the interviewers if they had questions or if they wanted to withdraw their consent. No participants withdrew from the study. The study was registered with the Danish Data Protection Agency and ethical guidelines of the Danish Psychologist Association were followed [43].

Results

The results are presented according to the four main themes that emerged from the data analysis, namely (1) a lack of a common understanding of stress; (2) a shift in focus; (3) challenges experienced by managers during the RTW process and (4) supportive factors experienced by managers during the RTW process.

Lack of a common understanding of stress

Several managers stated that the word "stress" had no exact meaning, as it described a range of conditions from being somewhat busy to feeling seriously anxious and ill. Some managers explained that the broad use of the word makes it difficult to know when it is necessary to take action.

"Stress for me is the negative version [of being busy]. The problem nowadays is that people use the word 'stress' randomly. Now everything is stressful... I think people forget to distinguish between the negative and the positive. It's okay to be busy". (P4)

The majority of managers considered being busy to be a positive state associated with putting forth extra effort, being committed and engaged. Thus, the articulation of being busy was widely perceived as an acceptable basic working condition with no potential negative health consequences, as opposed to being stressed:

"You don't get sick from being busy". (P4)

In some organizations, stress was not discussed at all:

"No, we talk about being very bus, and about there being a lot of pressure and people being fed up. That's what we talk about". (P2)

Other managers expressed that it was generally acceptable for employees to talk about stress and to report stress symptoms; however, talking about stress did not necessarily result in concrete preventive actions being taken in the work environment. The majority of managers, either directly or indirectly, described stress as being at least partly associated with personal weakness or vulnerability:

"In general, it is perceived as a weakness to be sick... stress and depression are taboo, but physical illnesses, such as a broken leg, are quite different". (P8)

"Stress is attributed to the individual's particular vulnerability or personal issues". (P2)

Some managers posited that stress-related sickness may only affect certain types of people. Moreover, some managers claimed that they would never experience WRS.

Thus, the lack of a common understanding of stress, the severity of WRS and the possible causes of stress, as well as its prevention, may hinder employees from voicing stress-related problems and impede the implementation of specific preventive stress interventions in the work place. A manager in the transportation industry exemplified the broad and somewhat diffuse understanding of stressors:

"It might be the psychosocial and physical work environment, colleagues, family, children, it might be the working hours, it could be the weather, a lot of stuff might affect you... I think everything has an impact". (P13)

Shift in focus from work environment to individual responsibility

In the interviews, managers focused on both stressors in the work environment and stressors related to individual circumstances

when discussing the causes of stress. However, their focus depended on the scope of the interview.

Tough and demanding work conditions were acknowledged by all managers, as they frequently mentioned large workloads, pressure, tight deadlines, restructuring and downsizing. Additionally, the majority of the workplaces had experienced recent large organizational changes, such as cutbacks or mergers and the majority of the managers reported that they had more than one employee on stress-related sick leave. The managers also expressed a need and a desire to create healthier work environments. One manager described experiencing a manic-depressive workplace atmosphere. In this case, one department had merged with another department and productivity demands had been raised, which resulted in management splitting up a well-functioning team structure and instead, assigned every employee specific tasks and then measured the performance of each individual employee based on those specific tasks. However, employees expressed not being able to use the restroom during a workday due to intense work pressure and failed to thrive within the new organizational structure. Furthermore, the manager expressed the challenges he faced when trying to cope with several employees who had long-term stress-related absences, claiming he had no support or guidance. At the same time, he feared that more employees would get sick, but he felt he did not have the time or the knowledge to implement interventions within the work environment. However, when we inquired during the interviews about specific employees on stress-related sick leave and who had responsibility, there was a sudden shift in focus from describing general problems in the work environment to emphasizing employees personal issues, such as problems in the employees families or employees psychological dispositions, such as perfectionism or an inability to adapt.

"I have an employee who is extremely dedicated to her work, very detail-oriented. She is an incredibly good performer, the best colleague, always ready to help, always willing to participate in projects. She is the world's best mother and always picks up her children at 3pm. She celebrates birthdays and always make homemade buns and jam. They don't have one birthday but they have three. She visits her grandparents at the nursing home at least every Thursday. She gets sick because of stress." (P1)

During the interviews, it became clear that questions concerning responsibility for absences due to stress-related illness caused discomfort for many managers. The above statement illustrates the shift from a focus on work to a focus on the individual that occurred when we talked about responsibility for sick-listings due to stress. We found that this shift occurred in most of the interviews.

During the follow-up interviews, we asked managers about the tendency to individualize employee stress. The respondents reflected upon this question in several ways. One manager explained that employee absences due to stress-related sickness could be perceived as a defeat or failure on the part of the manager, as the surrounding organization would place the major responsibility for the employee's illness on the manager. Hence, it was tempting to avoid accepting this responsibility by focusing on the individual and on personal causes for the stress-related illness:

"We have a tendency to say it's something private, so we just avoid the responsibility... There's a need to say it's not our responsibility." (P11)

More than half of the managers expressed that they were affected emotionally when employees went on sick leave due to WRS and that they felt both sorry for the employee and guilty about not having been attentive enough to prevent the situation. At the same time, they expressed frustration that the employee

did not ask for help earlier and felt that, because of this, the employee was partly responsible:

"I assume most of the responsibility, so I walk around feeling guilty, thinking it's probably me... that I'm not good enough. But the responsibility is, of course, only half mine. It's a shared responsibility so the employee is also responsible." (P6)

Several managers claimed that the employees stress-related absences took them by surprise because they (the managers) did not realize that the situation was so severe. Most managers considered it important to reflect on possible explanations of stress to assess the extent to which the stress was work-related, whether changes in the working environment were needed and whether they, as managers, were responsible. Several managers voiced that they felt better and less guilty when the stress was partially explained by personal factors and not just workplace factors. However, these reflections may have been shaped by a shift in focus to the individual approach to stress, which downplayed the problems in the work environment.

Challenges experienced by managers in the RTW process

The interviews revealed several challenges related to the RTW process, including managers experience with cross-pressure within the organization, discrepancies between strategic and human-relations perspectives in leadership and managers lack of ability to handle the RTW process for employees whose absence was due to WRS.

Cross-pressure due to opposing demands from employees and top management was experienced by the majority of line managers. Furthermore, coworkers were afraid that they, too, would become sick due to stress and believed that stress-related absences were caused by the work environment. Therefore, they expected line managers to improve the conditions within the work environment. At the same time, top management expected managers to comply with their departments goals and budgets despite the availability of fewer resources when one or more employees were sick listed:

"I think it's really, really hard, especially as a line manager... You need to meet the goals that are set for you... and, on the other hand, take care of a group of employees who are sick, have been sick, or are at risk of getting sick." (P6)

Consequently, in trying to avoid assuming the blame for an employee's WRS absence and to avoid facing further demands from the remaining employees, even though WRS was defined as a stress-related sickness primarily caused by conditions at work, some managers chose to discuss personal reasons for an employee's sick leave without the employee's permission:

"Yes, I chose to tell it. It's my leadership style, to be honest about it, to tell them, 'we don't know when (the employee) will come back, she has stress, and she also has (...), at least that is what she told me once, that there was some depression too. We simply don't know (when she will be back), but we hope for the best.'"

Interviewer: "Is this something that you discussed with the employee before telling the colleagues?"

"No, not when its long-term sick leave. Then I choose to tell it as it is because I think it is.... there are co-workers who cover her job, so I choose to tell it." (P2)

Revealing some of the more personal issues related to an employee's sick leave, even though doing so is a violation of the legislation, may signal to coworkers that the sick leave is the result of private circumstances, thereby minimizing the company's

potential blame and critical questions as well as expectations by employees for the manager to improve the working conditions. For some managers, this appeared to be more important than complying with the Danish legislation.

Several managers experienced pressure from both the top management and the coworkers to ensure the quick RTW of the employee. The managers stated that it was difficult to simultaneously take proper care of sick-listed employees, implement the best possible RTW process and oversee the remaining coworkers as they assumed extra workloads. One manager explained that the general culture among coworkers resulted in almost no tolerance for absences due to stress-related sickness or limited performance due to stress:

"If you haven't delivered 100% in one way or another, there's no mercy, there's no understanding... there's almost an atmosphere of lynching." (P11)

At this particular worksite there had been major cutbacks and employees had been divided into small teams. Hence, if a team member became sick, the rest of the team had to cover that team member's assignments. As a result, the manager declared that if employees were full-time sick-listed, they did not have the option to return to work. This was explained by colleagues of the full-time sick-listed employees did not want them (the sick-listed employees) back. Rather, the coworkers preferred a new employee be hired to fill the position as soon as possible.

The managers also experienced difficulties balancing their concerns for the sick-listed employees with the constant focus on associated costs. On one hand, they were supposed to be empathic and supportive and were to facilitate the RTW process. On the other hand, they were supposed to meet strategic and economic demands and estimate whether employees on sick leave would be able to return work within a certain time period or whether it would be more cost-effective to hire a substitute. Some managers experienced demands from top management to dismiss employees who were on long-term sick leave. However, the managers had often known the employees for years and recognized the severity of the employees personal situation, a circumstance that added to the emotional strain experienced by the managers. Accordingly, feelings of powerlessness as they were left alone to manage a major responsibility and forced to act as "the bad guy" when dismissing an employee on sick leave were common.

Approximately half of the managers felt that they received no or only minimal support from the organization during the RTW process and as a result, the expressed frustration with respect to this situation. More than half of the interviewed managers stated that they had no or only limited knowledge of how to effectively manage these situation and some managers stated they had no possible way to obtain support. Thus, their approaches in handling the situations depended solely on their experiences and knowledge.

"I wish there was a tool, something we could just pull out and say, 'This is what we're going to do now'". (P1)

Supportive factors experienced by managers in the RTW process

Managers listed the following factors as being of great importance during the RTW process: knowledge, experience, good communication with employees, clear company guidelines and policies regarding stress and the RTW process, which included access to professional guidance and the option to send employees to free psychological counseling for improved health.

The factor, clear company guidelines, refers to the procedures necessary to effectively implement the RTW process in organizations. Approximately half of the managers reported that their

workplaces had an official policy regarding stress. However, as some of the policies proved to be merely statements against stress, they lacked any real applicability:

"There is a stress policy, but let me say it loud and clear... it's like we do not want to have employees who are stressed and that's it. That's all I have as a manager to relate to." (P1)

Some managers used their companies stress policies to obtain information about RTW options, including individual treatment or interventions at the department level (e.g., team supervision). In this way, a detailed stress policy increased the managers abilities to make informed decisions:

"It describes how to deal with stress at all levels within the organization—individual and managerial as well as work and safety levels. We've also had great success with relocating employees when they return to work,— this is also described. In addition, there are guidelines on how to handle long-term sick leave, what triggers dismissal, etc." (P10)

In our study, two managers were found to differ from the remainder, namely, managers responsible for airline staff and train drivers. Due to safety regulations, they had very explicit guidelines as to how to handle sick leave and they had access to occupational health professionals who provided RTW plans. For these managers, handling the RTW process was an experience as an ordinary leadership task, rather than a task that was dependent on the managers personal knowledge and experiences.

"There are some global procedures from HR in [company] for all sorts of things that include follow-up on sick leave, and we have access to all the help we can get from the personnel doctor, HR personnel follow-up, legal issues etc. Additionally, management has meetings, theme days and seminars where we set the direction for how to run our business... There is also a personnel doctor connected who can provide guidelines for the return of employees, for example, whether they can [perform specific tasks]." (P13)

These managers differ in relation to the RTW task since cross-pressure was minimized due to the specific RTW procedures. Nonetheless, they still had the same challenges with respect to the lack of a common understanding of stress and regarding the shift in focus from the work environment to individual responsibility. Furthermore, differences were noted among some managers with comprehensive experience and a minimum of 12-years seniority. Even though they felt they were left alone to implement the RTW process, they described themselves as having an informal position where they were able to influence the decisions of top management regarding budgets and productivity demands. In this way, they felt they could protect their employees from work overload.

Knowledge and prior experience were described by several managers as their most valuable tools, as this prepared them to handle both current and future stress-related problems:

"Now I know the symptoms of stress, because of a previous episode where I didn't pay enough attention and didn't take it seriously enough... I didn't know it could be so serious, that it is actually something you can die from." (P11)

At the one-year follow-up session, almost all managers reported that their experiences of handling employees who were absent due to stress had provided them with more information and tools to manage similar situations in the future. However, managing an employee on sick leave due to stress was still considered to be a challenge, even though most managers had more than one employee on sick leave due to stress. Nonetheless, the managers specified that they felt better equipped to cope with future situations after their initial experience.

Several managers described an increased awareness of stress-related symptoms in their departments, which sometimes

led to more open communication and attempts to support each other:

"The situation in which an employee had to take sick leave due to stress has made us more aware, and since then, we've given another employee a 'forced' vacation and sent the employee to a psychologist through our company's health insurance to prevent similar stress-related breakdowns."
(P11)

Even though the levels of communication regarding stress differed among the various departments, most managers discussed the importance of good communications and relations with the absent employee. They further expressed the importance of mutual trust with respect to speaking openly about the causes and consequences of stress. In the vast majority of workplaces where managers reported good communications and positive relationships with absent employees; the employees returned to work, whereas in workplaces where managers described poor communications or no communications between the manager and the absent employee; the situation often resulted in the dismissal of the employee. It is possible that poor communication between managers and employees, to some extent, reflects a pre-existing conflict or challenge and that there is no actual interest in the RTW possibility by either the employee or the employer. Managers explained that good communication and relationships required regular meetings and phone calls with the sick employee, mutual trust and open dialogs about stressors, prognoses and the RTW process. An ongoing communication was, however, also emphasized as being highly important by managers of employees who did not return to the workplace, as such communications provided crucial information for managers when deciding to dismiss the employee.

Discussion

In this study, we found a lack of a common understanding of the concept of stress in the organizations. Instead, multiple understandings of stress and the causes of stress were expressed. For example, some organizations did not discuss stress at all, in others, stress was considered taboo and was connected to pre-judgment. One organization even described as having developed a culture of no tolerance for "stress related weaknesses". No managers discussed a systematic risk assessment of the work environment even though an employee had long-term sickness absence due to WRS. Most often, the responsibility to address employee stress was left to the line manager. Basic knowledge regarding stress, experience in handling stress and organizational intervention possibilities regarding stress reduction varied among managers and several challenges associated with the RTW task were identified. Cross-pressure experienced by line managers who were striving to meet the needs of the sick employee while also meeting productivity demands and assisting coworkers who were experiencing extra workloads due to the absence of their colleague on sick leave were described. Furthermore, colleagues would expect management to improve the working conditions when the sick listing was caused by stress. To avoid dealing with these demands and to avoid blame, some managers would voice private causes of stress without the permission of the employee, even though this violates the duty of confidentiality in the Danish legislation. Additionally, several challenges were identified in relation to the RTW task, for e.g., balancing the decision between whether managers believed that the sick employee would return to work or whether the employee should be dismissed, as well as feeling guilty for not having prevented the stress related sickness in the first place. Ben Avi et al. [44] conducted an experimental study in

which they found that a person's "stress mindset", that is the mental framework or lens that accentuates stress's negative or positive consequence, affects the way the person encodes and interpret stress related information of other people's stress. The researchers found that if a person has a positive "stress mindset" he or she will be more likely to evaluate a "stressed" employee as having less somatic symptoms, presenteeism and as having more life satisfaction, less burnout and less depression compared to a person with a negative "stress mindset". This may explain why managers could describe severe problems in the work environment but still be surprised when an employee was sick listed due to WRS. Another perspective regarding the contradiction between managers acknowledging problems in the work environment and being surprised by the sick listing of an employee is provided by a recent Danish study, which found that employees experience shame in relation to WRS. This can cause employees to hide their symptoms of stress [45], thereby making it difficult for managers to intervene before the sick listing. Noordik et al. [31] also identified a gap between intentions and plans for implementing the RTW process versus what actually was implemented/changed, noting that though there may be good intentions and plans for the RTW process for employees with common mental disorders, there are important inhibiting factors which must be addressed.

In our study, managers tended to shift focus from work related stressors to individual stressors related to personality and life circumstances. In this sense, managers tried to avoid guilt and instead, blame the surroundings. This shift may be caused by a lack of a common understanding of stress combined with the manager as the sole responsible party for implementing the RTW process while experiencing cross-pressure and emotional conflict. Importantly, this shift in focus, as well as the situations where managers describe not talking about stress in the workplace, may be a barrier for the implementation of important organizational interventions aimed at managing problematic work conditions causing WRS. A focus on personality or individual life circumstances as causes of stress points to tertiary interventions that are focused on alleviating symptoms and related problems. However, these tertiary interventions have been criticized for not being particularly effective in reducing stress [46]. Furthermore, several studies have indicated that factors related to the work environment, such as high job demands, lack of control, lack of social support, role conflict and organizational changes, are strongly associated with the development of stress among employees and thus, an individual focus on stress alone should not occur [32,35,46,47]. This finding is supported by Daniels [33], who found that its the managers' perceptions that stress is an individual problem and thus the responsibility of the individual led to managers not considering stress to be a risk factor that should be actively managed within the organization. In addition, Sharpley et al. [34], who interviewed 36 managers regarding their understanding of stress, found that although managers acknowledged stress as an issue of significant concern, few managers initiated stress management interventions at work as they felt that doing so may signal that they, as managers, were responsible for WRS, a finding that conflicted with their desire to avoid drawing negative attention to themselves. Previous research [48] has found that there may be various discourses regarding stress in an organization. Lewig et al. [49] noted that the manner in which stress is understood and managed in organizations is not only based on a scientific understanding, but it is also shaped by other social and cultural factors.

To avoid multiple understandings and individual approaches to stress that may be damaging to the RTW process as well as to possible interventions in the work environments, a common and

formal definition of stress should be emphasized within the workplace. Similarly, a systematic risk assessment of the work environment when employees are sick listed due to WRS should be developed.

Co-workers, cross-pressure and the RTW process

As referred to in the results section, sick leave due to WRS often resulted in further pressure on coworkers and at some workplaces, this resulted in coworkers not wanting their sick colleagues to return to the workplace. Tjulin et al. [50] and Petersen et al. [51] studied coworkers during the implementation of work reintegration processes for sick workers and found that the organization of the work and the level of interactions among coworkers affected coworkers approaches to retain sick employees in the workplace. Furthermore, while the aforementioned studies recommend involving coworkers when planning for RTW interventions to improve the possibility of success, our study points to the importance of protecting the coworkers from overload when a colleague is sick listed as there may be limitations regarding how much and for how long the colleagues can support the sick-listed coworker without it having negative consequences on their own mental well-being. Our findings add to the RTW literature by illustrating the profound dilemma and cross-pressure that line managers experience when dealing with the RTW process for employees who are sick listed with WRS. Cross-pressure is explained in the literature as the pressure to navigate between opposing demands and conflicting requirements [47], which is exactly what managers describe as a basic dilemma. Managers expressed a struggle between top management's demands for efficiency and coworkers concerns for their own health, which pressures line managers to take action to improve working conditions. Additionally, we found that many line managers felt alone and felt they had no support when attempting to implement the RTW processes within a limited timeframe during which they are to successfully drive the process, while cross-pressure was found to be profound when top management's strategic decisions conflicted with the needs of coworkers and sick-listed employees. Seing et al. [52] found that organizational responses to sick-listed workers are primarily characterized by an economic perspective and thus, whether it is profitable to retain the employee depending on the employee's competencies and his/ her specific value to the organization. This result supports our findings in that it highlights the line managers dilemma and the associated cross-pressure. Furthermore, our study suggests that the RTW process is defined and prioritized as a formal task that is aligned with other strategic objectives, suggesting that line managers do not have to struggle to navigate opposing goals. Integrating the RTW process as a tool into formal performance management systems could be specifically helpful for line managers. Several managers in our study also called for added economic resources to hire temporary staff, to adapt working conditions or to provide opportunities to lower productivity outcomes with the aim of preventing coworkers from becoming overloaded and eventually experiencing WRS issues. Thus, it is suggested that organizations strive to allow managers to adapt working conditions that better align with the needs of the employees. In our study, several factors were mentioned by managers as beneficial to the RTW process, namely, knowledge and experience, good communication with employees and clear company guidelines and policies regarding stress and the RTW process. Studies in the field highlight the importance of positive relationships and communications between managers and employees during the RTW process and the rehabilitation of workers with absences due to stress-related sickness [53] and mental

health problems [54]. However, several studies have found that managers lack both the knowledge and the organizational support to effectively manage the RTW process [27–29]. Furthermore, Cunningham et al. [55] noted that managers may feel poorly prepared and isolated due to a lack of training and support when managing employees who are experiencing physical or mental challenges. Our study emphasizes that organizations should not hold the individual line managers solely responsible for the RTW process.

Strengths and limitations of the study

Our study contributes to new knowledge in this area by discussing managers experiences in managing absences due to long-term sickness among employees with WRS. This insight is important for ensuring the effective implementation of interventions intended to help employees return to work following sick leave due to stress or mental health problems. The qualitative approach offers a nuanced understanding of managers roles in the RTW process and provides insight into the dilemmas and challenges that managers experience during the RTW process. Follow-up interviews made it possible to gain profound insight into the RTW process, validate our initial findings and challenged hypotheses on possible relationships and paradoxes related to the successful (or unsuccessful) implementation of the RTW process. Another strength relates to the process of recruiting informants, including managers with employees on stress-related sick leave, based on a clinical assessment. In this context, one limitation of the study may be the recruitment of line managers, as their willingness to participate may have depended on whether they had a positive relationship with employees. Thus, the participating managers may not constitute a representative sample. Nevertheless, our impression was that the dynamics and experiences found in this study reflect a general tendency, given that our findings were supported by related international studies [32–34].

Conclusion

Our study contributes new knowledge to the literature on RTW by exploring line managers experiences with the RTW process when an employee is on sick leave due to WRS. This insight is important to ensure the implementation of efficient RTW interventions for these employees, as managers are the key actors in this regard. The lack of a common understanding of stress creates room for general confusion and can be a barrier for preventive interventions in the work environment. Our results indicate that even though managers may accept the overall concept of WRS, there is a tendency to refer to personality and individual circumstances and to place responsibility on the employees rather than on the organizations and on themselves as managers. However, line managers often experience cross-pressure between the demands of top management, the needs of the sick-listed employee and the needs of the colleagues. Additionally, as discrepancies between strategic and human-relations perspectives in relation to sick employees were also experienced and observed during the RTW process, organizational support, guidelines, knowledge and good communication with sick employees were identified as essential elements when engaged in the RTW process. Furthermore, protecting coworkers from a high workload when a colleague is sick listed is also important. Our study emphasizes that the responsibility of implementing the RTW process should not be left entirely to the individual line managers. Moreover, a common definition and understanding of stress, as well as a systematic assessment of potential risk factors within organizations, are important when an

employee is sick due to WRS, as is the involvement of coworkers in the RTW process of sick-listed employees. Cross-pressure on line managers should be recognized and organizational support, room for action, knowledge and guidelines regarding WRS and RTW should be available to line managers as these resources could support the RTW process for employees who are sick listed with WRS and support important interventions in the work environment.

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APPENDIX 2. PAPER II

Ladegaard Yun, Thisted Cecilie, Gensby Ulrik, Skakon Janne, Netterstrøm Bo

Hvordan håndterer danske arbejdspladser arbejdsrelateret sygdom? Oplevelser fra medarbejdere med psykisk sygdom, ryggsygdom eller hudsygdom

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UDEN FOR TEMA

Hvordan håndterer danske arbejdspladser arbejdsrelateret sygdom?

Oplevelser fra medarbejdere med psykisk sygdom, rygsygdom eller hudsygdom

Yun Ladegaard, Cecilie Nørby Thisted, Ulrik Gensby, Janne Skakon og Bo Netterstrøm

I Danmark ses en stigning i antallet af medarbejdere, der får anmeldt en sygdom som arbejds-skade. Psykiske helbredsproblemer og muskel- og skeletbesvær vurderes at være de største udfordringer i arbejdsmiljøet i Danmark med omkostningerne på 60-80 mia. kr. årligt. Arbejdspladsens håndtering, herunder leders og kollegaers, er afgørende for, om medarbejderen vender tilbage til arbejdspladsen. I denne artikel undersøges, hvordan medarbejdere med arbejdsrelateret sygdom oplever arbejdspladsens håndtering, herunder hvorvidt forskellige aktører inddrages, hvilken indsats der ydes, og om der er forskel afhængig af, om det er en psykisk sygdom, rygsygdom eller hudsygdom.

Baggrund

I rapporten *Fremtidens arbejdsmiljø 2020* konkluderes det, at psykisk arbejdsmiljø og muskel- skeletbesvær er to af de arbejdsmiljøområder, som får størst betydning for medarbejders sundhed og arbejdskraft-udbud på det danske arbejdsmarked som helhed (Arbejdstilsynet 2010). Gennem en årrække har anmeldte arbejdsskader (erhvervssygdomme) været stigende, og f.eks. er anmeldelser af psykisk erhvervssygdom steget 51 % fra 2010 til 2016 (Arbejdsmarkeds Erhvervssikring 2017). Det estimeres, at dårligt arbejdsmiljø årligt koster det danske samfund 60-80 milliarder kroner (Løvgren

2015), og på europæisk plan koster arbejdsrelateret sygdom og ulykker årligt 476 milliarder euro (EU-OSHA 2017). Forebyggelse af arbejdsrelateret sygdom samt støtte til medarbejdere, der er blevet syge på grund af arbejdspladsen, er derfor centralt.

Den danske arbejdslivsforskning i arbejdsrelateret sygdom og tilbagevenden til arbejde har vist, at det er afgørende, at arbejdspladsen har et beredskab, når en medarbejder er sygemeldt eller kommer ud for en arbejdsskade (Andersen m.fl. 2012; Holt & Nilsson 2013; Gensby m.fl. 2014).

Det er essentielt at sikre relevant støtte og samarbejde omkring en medarbejders tilbagevenden til arbejde (Nielsen & Aust 2013). Nogle studier indikerer dog, at arbejdsrelateret sygdom håndteres forskelligt på arbejdspladser afhængig af, om det er fysisk eller psykisk sygdom (Munir m.fl. 2005; Mendel m.fl. 2015). Arbejdsgivere kan have en tendens til at være mere kritiske over for medarbejdere med psykisk sygdom og disse medarbejders arbejdsevne, end det er tilfældet over for medarbejdere med fysisk sygdom (Mendel m.fl. 2015). Derudover ser det ud til, at støtte og indsats på arbejdspladserne for medarbejdere med fysiske sygdomme er bedre sammenlignet med støtte og indsats for medarbejdere med psykisk sygdom (Munir m.fl. 2005). Dette kan skyldes, at det kan være mere udfordrende at udrede og tilpasse arbejdet til medarbejdere med arbejdsrelateret psykisk sygdom (Hjarsbech m.fl. 2015; Andersen m.fl. 2014).

I mange tilfælde er håndteringen af arbejdsrelateret sygdom afhængig af, at de involverede aktører er i stand til at koordinere indsats og udveksle vigtige oplysninger omkring tilpasning af arbejde og arbejdsvilkår for at sikre, at medarbejderen vender bæredygtigt tilbage (Thuesen & Gensby 2010). Indsatsen skal være gennemsækelig både for medarbejderen og for de forskellige aktører på arbejdspladsen (Holt & Nilsson 2013), og centrale elementer for at kunne hjælpe en syg medarbejder tilbage til arbejde er dels, at arbejdsgiveren har viden om medarbejderens behov for ændringer i arbejdet, og dels at disse ændringer kan implementeres på den pågældende arbejdsplads (Bach 2008). Lederen spiller en central rolle både ved medarbejderfastholdelse i forbindelse med sygdom og i forbindelse med tilbagevenden til arbejdet efter en sygemelding (Stockendahl m.fl. 2015). Et kollegialt fokus er også væsentligt,

og her viser nyere studier, at arbejdspresset på kolleger og de sociale relationer mellem kolleger og den sygemeldte spiller en rolle (Larsen m.fl. 2015). Ligeledes har det gældende ledelsessystem for fastholdelse (Gensby m.fl. 2014) og de overenskomstmæssige rammevilkår (Holt & Nilsson 2013) betydning for arbejdspladsens håndtering af syge medarbejdere.

I praksis kan der derfor være stor forskel på, hvordan arbejdsrelateret sygdom håndteres på arbejdspladsen, herunder hvilke aktører der involveres i processen i forbindelse med tilbagevenden til arbejde, (Tjulin m.fl. 2010; Selander m.fl. 2015), samt hvilke arbejdsvilkår medarbejderen vender tilbage til (Seing m.fl. 2015). Undersøgelser på området viser, at mange indsats på arbejdspladserne synes at have størst fokus på den tidlige fase af den sygemeldtes tilbagevenden til arbejde, hvorimod egentlige interventioner på arbejdspladsen, hvad angår tiltag i arbejdsmiljø og tilpasning af arbejdsvilkår, fremstår mindre formaliseret og koordineret (Tjulin m.fl. 2010; Gensby & Husted 2013). I en dansk kontekst findes kun få studier, der kortlægger arbejdspladsens håndtering af arbejdsrelateret sygdom og aktørinddragelse ved sygemeldtes tilbagevenden til arbejde (Borg m.fl. 2010). I den forbindelse er medarbejdernes oplevelser af arbejdspladsindsatsen underbelyst. I nærværende artikel undersøges derfor:

Hvordan oplever medarbejdere med en anmeldt arbejdsrelateret sygdom arbejdspladsens håndtering, og er der forskel på hvilke aktører, der inddrages og på indsatsen afhængig af typen af sygdom?

I studiet sammenlignes data fra medarbejdere, som har haft en anmeldt arbejdsskade (erhvervssygdom) i arbejdsskadesystemet fra 2010-2012, enten psykisk sygdom, ryg-sygdom eller hudsygdom. Oftest anmeldes

erhvervssygdomme af speciallæger, psykologer eller den praktiserende læge, dvs. der foreligger en faglig vurdering af, at sygdommen er relateret til arbejdet (Arbejdsskadestyrelsen 2012). Studiet bidrager med indsigt i en unik populations oplevelser på arbejdspladserne, herunder forskellige arbejdspladsaktørers inddragelse og betydning, og hvorvidt der bliver igangsat forebyggende tiltag på arbejdspladserne.

Design & Metode

Denne artikel bygger på spørgeskemaundersøgelser indsamlet i *Projekt Arbejdsskadesystem*. Projektets formål var at undersøge, hvordan medarbejdere med en anmeldt arbejdsskade (erhvervssygdom) oplever forløbet på arbejdspladsen og i det danske arbejdsskadesystem.

Spørgeskemaet blev udviklet på baggrund af en række medarbejder- og ekspertinterviews og blev pilot testet efter principper fra Boynton (2004). Pilottestningen bestod i, at fem medarbejdere med anmeldte arbejdsskader, rekrutteret gennem Arbejds- & miljømedicinsk afdeling på Bispebjerg Hospital, fik tilsendt spørgeskemaet i papirform. Efter udfyldelse blev de interviewet om forståelsen af og baggrunden for deres svar på hvert enkelt spørgsmål. Spørgeske-

maet blev efterfølgende revideret og testet online på 13 personer, som kommenterede på spørgsmålsformulering, opsætning og brugervenlighed. Spørgeskemaet blev igen revideret på baggrund af kommentarerne.

I 2014 blev der udført et randomiseret udtræk fra Arbejdsmarkedets Erhvervssikrings database (dengang Arbejdsskadestyrelsen) af 1521 personer, som mellem 2010-2012 havde anmeldt en psykisk sygdom, rygssygdom eller hudsygdom som erhvervssygdom og ikke tidligere havde haft anmeldte arbejdsskader. Da et af formålene ved undersøgelsen var at udforske forskelle mellem medarbejdere med anerkendte og afviste arbejdsskadeanmeldelser, var samplet ikke repræsentativt. (Se tabel 1). Anerkendelsesprocenten i 2016 var 4,1 % for psykiske sygdom, 13,8 % for rygssygdom og 58,4 % for hudsygdom.

Medarbejderne blev kontaktet i december 2014 via et brev, som indeholdt en beskrivelse af undersøgelsens formål og en personlig kode til spørgeskemaet online. Seks uger senere blev der udsendt et opfølgende brev inkl. returkonvolut og spørgeskemaet i papirform til personer, som ikke havde svaret i første runde.

I spørgeskemaet blev der spurgt ind til en række faktorer, som havde vist sig centrale i de indledende interviews, bl.a. arbejds-

Tabel 1. Randomiseret udtræk af personer med anmeldte erhvervssygdomme fra Arbejdsmarkedets Erhvervssikrings (AES) database

Type anmeldt erhvervssygdom	Antal personer	Kriterier for udtræk
Psykisk sygdom	321	Anerkendt i AES
	400	Afvist i AES
Rygssygdom	200	Anerkendt i AES
	200	Afvist i AES
Hudsygdom	200	Anerkendt i AES
	200	Afvist i AES

Udtrækket blev gennemført i rækkefølgen angivet i tabellen, samme person kunne ikke udtrækkes flere gange)

pladsens håndtering af sygdomsforløbet, kendskab til anmeldelsen, ændringer i arbejdsmiljøet efter de var blevet syge, samt betydningen af en række aktører på arbejdspladserne (det komplette spørgeskema findes på www.arbejdsskadesystem.dk).

Ud af de 1521 personer besvarede 770

spørgeskemaet. 751 besvarede ikke spørgeskemaet. Blandt de, der svarede, var der signifikant flere kvinder, flere over 55 år, flere ansat inden for uddannelses- og sundhedssektoren og flere med arbejdsrelaterede belastningstilstande såsom angst og stress sammenlignet med ikke-svarende (dro-

Tabel 2: Baggrundsinformationer på 770 medarbejdere med anmeldte erhvervssygdomme som udfyldte spørgeskemaet i Projekt Arbejdsskadesystem

	Samlet (N=770)	Psykisk sygdom (N=436)	Rygssygdom (N=202)	Hudsygdom (N=132)	P
Kvinder	64,8	72,5	46,0	68,2	<0,001
Alder					
<40	20,9	20,0	8,4	43,2	<0,001
40-55	46,1	51,4	44,6	31,1	
>55	33,0	28,7	47,0	25,8	
Afgørelse – Anerkendt	52,1	46,8	55,0	62,2	0,001
Højeste færdiggjorte uddannelse					
Ingen videregående uddannelse	17,7	8,9	35,6	18,9	<0,001
Kortere videregående uddannelse	38,2	30,5	49,0	47,0	
Længere videregående uddannelse	44,2	60,6	15,3	34,1	
Branche					
Service	41,6	42,4	36,6	46,2	<0,001
Uddannelse/sundhedssektor/institution	33,1	39,2	23,8	27,3	
Produktion/håndværk/landbrug	16,6	6,0	35,6	22,7	
Politi/beredskab/forsvar/fængsel	7,0	10,8	2,5	1,5	
Uoplyst	1,7	1,6	1,5	2,3	
Type ansættelse					
Fastansat	78,1	92,2	57,9	62,1	<0,001
Timelønnet	17,5	5,0	40,1	24,2	
Andet	4,4	2,8	2,0	13,6	
Helbred dårligt i dag	48,2	47,5	69,7	18,2	<0,001
Langvarigt sygefravær >8 uger	55,3	70,2	55,4	6,1	<0,001
Ansæt på samme arbejdsplads i dag	27,4	23,2	28,7	39,4	0,001
Anciennitet på arbejdsplads ved sygemelding					
<1 år	7,7	5,8	3,6	21,1	<0,001
1-9 år	56,5	62,9	43,7	54,5	
>9 år	35,8	31,2	52,8	24,4	

poutanalyse fremgår i bilag 1, tabel 1 på www.arbejdsskadesystem.dk).

Analyser

Populationen (N=770) blev i første omgang opdelt i diagnose: *Psykiske sygdomme* udgjorde 56,7 % (8,2 % var posttraumatisk belastningsreaktion (PTSD), 12,5 % depression og 36,0 % andre psykiske lidelser som eksempelvis stressrelateret sygdom eller angst). *Ryg sygdomme* tegnede sig for 26,2 % (21,4 % var karakteriseret som rygmerter og 4,8 % ryghvirvelsygdomme), og *hudsygdomme* for 17,1 % (11,4 % var toksisk eksem, 3,5 % allergisk eksem og 2,2 % andre hudsygdomme). Sygdomskategorierne kom

fra Arbejdsmarkedets Erhvervssikrings registrering af slutdiagnosen i forbindelse med arbejdsskadesagen.

De statistiske analyser er foretaget med chi²-tests til belysning af, om der var statistisk signifikant forskel på besvarelsene mellem sygdomsgrupperne. Der anvendtes endvidere chi²-tests for at teste forskellen mellem svarere og ikke-svarere i dropout-analysen, forskel i besvarelsene fordelt på branche (service, uddannelse/sundhedssektor/institution, produktion/håndværk/landbrug, politi/beredskab/forsvar/fængsel), selvrapporateret helbred på tidspunktet for besvarelsen (godt helbred; fremragende, vældig godt, godt, og dårligt helbred; mindre

Tabel 3. Medarbejdere med anmeldte erhvervssygdommes vurdering af deres daværende arbejdsplads, samt status for arbejdsmarkedstilknytning 2-4 år efter den anmeldte erhvervssygdom.

	Samlet (N=770)	Anmeldt psy- kisk- sygdom (N=436)	Anmeldt ryg- sygdom (N=202)	Anmeldt hud-sygdom (N=132)	P
A. Hvordan håndterede din arbejdsplads forløbet omkring din sygdom?					
Godt	36,2	26,6	42,1	59,1	<0,001
Dårligt	54,0	68,8	46,5	16,7	
Andet/ved ikke	9,7	4,6	11,4	24,2	
B. Blev der foretaget nogle ændringer i arbejdsmiljøet som følge af din sygdom?					
Ja	14,4	12,4	12,9	23,5	0,030
Til dels	16,6	17,9	13,4	17,4	
Nej	54,5	55,0	57,4	48,5	
Andet/ved ikke	14,4	14,7	16,3	10,6	
C. Vidste lederen på din daværende arbejdsplads, at du havde anmeldt sygdommen i Arbejdsskadestyrelsen?					
Ja	64,9	67,4	61,4	62,1	0,014
Nej	21,6	17,4	28,7	24,2	
Andet/ved ikke	13,5	15,1	9,9	13,6	
D. Hvilken betydning har følgende personer på din daværende arbejdsplads haft for dig i forløbet med din sygdom og arbejdsskadeanmeldelse?					
Øverste ledelse					
Positiv	14,4	12,2	16,8	18,2	<0,001
Neutral	18,3	16,7	19,8	21,2	
Negativ	32,3	46,6	19,8	4,5	
Ikke involveret/andet	35,0	24,5	43,6	56,0	

Nærmeste leder					
Positiv	22,2	18,8	26,2	27,3	<0,001
Neutral	18,1	15,1	20,8	23,5	
Negativ	36,9	52,3	21,3	9,8	
Ikke involveret/andet	22,8	13,8	31,7	39,4	
Tillidsrepræsentant					
Positiv	22,3	23,9	21,8	18,2	<0,001
Neutral	19,4	19,7	21,3	15,2	
Negativ	12,2	15,8	8,9	5,3	
Ikke involveret/andet	46,1	40,6	48,0	61,3	
Arbejdsmiljørepræsentant					
Positiv	14,7	12,4	17,8	17,4	<0,001
Neutral	20,3	19,5	23,8	17,4	
Negativ	12,7	17,4	6,9	6,1	
Ikke involveret/andet	52,3	50,7	51,5	59,1	
Kollegaer					
Positiv	42,5	44,5	41,6	37,1	<0,001
Neutral	21,0	22,0	21,3	17,4	
Negativ	12,2	17,2	5,4	6,1	
Ikke involveret/andet	24,3	16,2	31,7	39,4	
E. Har Arbejdstilsynet været på inspektion på din arbejdsplads som følge af din anmeldelse?					
Ja/til dels	6,3	8,3	4,5	3,0	0,085
Nej	64,3	60,1	69,8	69,7	
Ved ikke/andet	29,4	31,7	25,7	27,3	
F. Oplever du, at du startede for tidligt med at arbejde igen efter den anmeldte sygdom?					
Ja/ til dels	35,1	45,6	26,8	12,9	<0,001
Nej	33,8	26,8	39,8	47,7	
Andet /ved ikke	31,1	27,5	33,3	39,4	
G. Er du ansat på samme arbejdsplads i dag?					
Ja - ansat på samme arbejdsplads i dag	27,4	23,2	28,7	39,4	0,001
G,1, Hvorfor er du ikke længere ansat på den tidligere arbejdsplads? (N=412)					
Fyret	68,0	72,9	75,8	32,8	<0,001
Selv sagt op	27,7	23,9	17,2	62,1	
Ansættelse udløb/andet	4,4	3,1	7,1	5,2	
H. Nuværende beskæftigelse?					
Ansat i den private sektor	22,6	17,0	26,2	35,6	<0,001
Ansat i den offentlige sektor	34,5	40,1	24,3	31,8	
Under uddannelse	5,1	3,7	2,0	14,4	
Udenfor arbejdsmarkedet	37,8	39,2	47,5	18,2	

godt, dårligt), alder (<40 år, 40-55 år, >55 år), afgørelse af erhvervssygdomsanmeldelsen (anerkendt, afvist) og køn (kvinde, mand).

I resultatafsnittet sammenlignes spørgeskemabesvarelsenerne for de tre typer erhvervssygdomme. I Bilag 1 findes de resterende analyser. Udvalgte resultater inkluderes i teksten, når de kan belyse hovedanalyserne. I spørgeskemaet indgik også åbne svarfelter, hvor medarbejderne kunne beskrive deres oplevelser. Disse blev kategoriseret, og udvalgte fund, som bidrager med yderligere information til de kvantitative fund, præsenteres i resultatafsnittet. Der refereres løbende til Bilag 1 som ligger på www.arbejdsskadesystem.dk.

Resultater

Medarbejdere med anmeldte erhvervssygdommes vurdering af deres daværende arbejdsplads, samt status for arbejdsmarkedstilknnytning 2-4 år efter den anmeldte erhvervssygdom. _

Håndtering og ændringer på arbejdspladserne

Der var signifikant flere medarbejdere med arbejdsrelateret psykisk sygdom ift. de andre grupper, som vurderede, at arbejdspladsen havde håndteret forløbet omkring sygdommen dårligt (Tabel 3, A). I analyserne viste det sig, at der var forskel, afhængig af hvilken branche medarbejderne var ansat i. Derudover viste det sig, at kvindelige medarbejdere, medarbejdere med dårligt selvrapporateret helbred, eller medarbejdere med afvist arbejdsskadeanmeldelse vurderede, at arbejdspladsen havde håndteret forløbet dårligere sammenlignet med hhv. mandlige medarbejdere, medarbejdere med godt selvrapporateret helbred og medarbejdere med anerkendt arbejdsskadeanmeldelse (Bilag 1, Tabel 2, A). Medarbejdere med hudsygdomme oplevede arbejdspladsens

håndtering mest positiv sammenlignet med medarbejdere med psykisk sygdom eller ryggsygdom (Tabel 3, A).

På de fleste arbejdspladser kendte lederen til, at den pågældende medarbejder var syg, og at sygdommen var anmeldt som arbejdsrelateret sygdom (Tabel 3, C). På trods af dette blev der på over halvdelen af arbejdspladserne ikke foretaget ændringer i arbejdsmiljøet. I 16,6 % af tilfældene blev der foretaget mindre eller delvise ændringer (Tabel 3, B), men i spørgeskemaets åbne svarkategorier viste det sig, at der ofte var tale om ændringer i den enkeltes arbejdsopgaver, så som omplaceringer og lignende. Flere beskrev, at de ikke selv var blevet involveret i beslutningerne om ændringerne. Således havde flere medarbejdere oplevet ufrivillige omplaceringer, f.eks. i situationer, hvor de var blevet udsat for mobning, mens der ikke blev foretaget ændringer i forhold til dem, som mobbede. Andre medarbejdere med psykisk sygdom beskrev midlertidige ændringer i starten af forløbet, men hvor de efterfølgende vendte tilbage til samme arbejdsforhold. I beskrivelserne fra medarbejdere med anmeldte ryggsygdomme handlede det primært om, hvorvidt der kunne tages individuelle hensyn, og om arbejdspladsen ville investere i ekstra hjælpemidler. I beskrivelserne fra medarbejdere med hudsygdomme var der beskrivelser vedrørende organisatoriske og individuelle hensyn f.eks. at skifte til parfumefri produkter, håndsprit samt værnemidler såsom handsker. Flere med hudsygdomme og flere som havde fået anerkendt sygdommen som arbejdsrelateret oplevede ændringer i arbejdsmiljøet sammenlignet med hhv. ryg og psykisk sygdom (Tabel 3, B; Bilag 1, Tabel 2, B).

Betydningen af aktører på arbejdspladserne

Der var store forskelle på medarbejderes oplevelse af de forskellige aktørers inddragelse og betydning på arbejdspladserne. Således blev øverste og nærmeste leder oplevet markant mere negativt af medarbejdere med anmeldt psykisk sygdom end medarbejdere med andre sygdomme (Tabel 3, D). Kvinder vurderede øverste og nærmeste ledelse mere negativt end mænd, og der var ligeledes forskel afhængig af branche (Bilag 1, Tabel 2, D).

Flere medarbejdere med anerkendte anmeldelser vurderede nærmeste leders betydning positiv sammenlignet med medarbejdere med afviste anmeldelser. Medarbejdere med dårligt helbred vurderede i højere grad øverste ledelse negativt. Det viste sig, at tillidsrepræsentanten oftere blev involveret, når en medarbejder var syg med en psykisk sygdom, men tillidsrepræsentantens involvering kunne både opleves positivt eller negativt (Tabel 3, D). Medarbejdere ansat inden for *politi/beredskab/forsvar/fængsel* og *uddannelse/sundhedssektor/institution* oplevede tillidsrepræsentanten mere positivt sammenlignet med øvrige brancher. Arbejdsmiljørepræsentanten blev vurderet mere negativt af medarbejdere med psykisk sygdom sammenlignet med medarbejdere med ryg- eller hudsygdom. Ofte var hverken arbejdsmiljørepræsentant eller tillidsrepræsentanten involveret i forløbet, når en medarbejder havde en arbejdsrelateret sygdom. Kollegaerne var oftere involveret i forbindelse med arbejdsrelateret psykisk sygdom, men det varierede, hvorvidt medarbejderne oplevede, at kollegaerne havde en positiv eller negativ betydning (Bilag 1, Tabel 2, D). På 6,4 % af arbejdspladserne havde medarbejderne kendskab til, at Arbejdstilsynet havde været på inspektion som følge af anmeldelsen, og

her blev ikke fundet forskel mellem grupperne (Tabel 3, E).

Hvordan gik det medarbejderne?

45,6 % af medarbejderne med psykiske lidelser vurderede, at de var startet for tidligt på arbejde igen, mens dette var gældende for 26,8 % af medarbejdere med ryg sygdomme og 12,9 % af medarbejdere med hudsygdomme (Tabel 3, F). Medarbejdere med dårligt selv vurderet helbred svarede oftere, at de var startet for tidligt sammenlignet med medarbejdere med godt selv vurderet helbred. Flere kvinder end mænd vurderede, at de var startet for tidligt, og der var også forskel afhængig af branche, hvor medarbejdere inden for brancherne *uddannelse/sundhedssektor/institution* og *politi/beredskab/forsvar/fængsel* i højere grad oplevede at være startet for tidligt sammenlignet med medarbejdere indenfor de øvrige brancher (Bilag 1, Tabel 2, F). De fleste med ryg sygdom og psykisk sygdom, som stoppede på den arbejdsplads, hvor de havde haft en arbejdsrelateret sygdom, blev opsagt, mens der var flere medarbejdere med hudsygdomme, som selv sagde op (Tabel 3, G). To til fire år efter sygdommen arbejdede blot 23,2 % med psykisk sygdom og 28,7 % med ryg sygdom på samme arbejdsplads som før sygdommen, mens dette var gældende for 39,4 % med hudsygdom (Tabel 3, H). To til fire år efter den arbejdsrelaterede sygemelding var 47,5 % af deltagerne med ryg sygdomme, 39,2 % med psykisk sygdom og 18,2 % med hudsygdom uden for arbejdsmarkedet (Tabel 3, H).

Diskussion

Håndtering af arbejdsrelateret sygdom

Undersøgelsen viste, at flere med psykisk sygdom i forhold til ryg- og hudsygdomme vurderede, at arbejdspladsen havde håndte-

ret forløbet omkring deres sygdom dårligt. I gennemsnit vurderede over halvdelen af alle deltagere, at arbejdspladsen havde håndteret forløbet omkring deres helbredssituation og tilbagevenden til arbejde dårligt. På trods af at en medarbejder var blevet sygemeldt med en arbejdsrelateret sygdom, blev der på mange arbejdspladser ikke foretaget ændringer i arbejdsmiljøet, og selv når det skete, var det ofte ændringer i den enkeltes arbejde og ikke generelle forbedringer i arbejdsmiljøet.

Undersøgelsen tegner således et billede af, at sygemeldte oplever, at danske arbejdspladser har en mangelfuld indsats, specielt hvad angår psykisk sygdom og rygsygdom, når en medarbejder bliver syg pga. arbejdet, både ift. håndteringen af den enkelte samt forbyggende og intervenserende arbejdsmiljøindsatser. Dette billede underbygges af forskning på området, som viser, at reintegration på arbejdspladsen efter langtids-sygemelding oftest håndteres med tiltag for den enkelte medarbejder, såsom reduceret arbejdstid og modificerede arbejdsopgaver (Larsen m.fl. 2015). Der ser ud til at mangle strukturelle tiltag og forebyggende indsatser, hvilket kan skyldes, at de involverede aktører ikke har de fornødne ressourcer hertil eller interesser heri.

Seing m.fl. (2015) har vist, at arbejdsgivere er udfordrede ift. at tage ansvar for medarbejderes tilbagevenden til arbejde, fordi de vægter arbejdspladsens økonomiske interesser højere end lovgivningsmæssige og etiske hensyn. Kortsigtede økonomiske hensyn kan derfor resultere i, at strukturelle indsatser på arbejdspladsen ikke iværksættes, fordi de umiddelbart kræver flere ressourcer end mindre ændringer i den enkelte medarbejders arbejde. Strukturelle ændringer på arbejdspladsen styrker imidlertid den interne koordinering og inddrager viden om arbejdsmiljøet, som den sygemeldte vender tilbage til, hvilket

kan understøtte holdbare tiltag på arbejdspladsen for et større antal medarbejdere og således forebygge arbejdsskader i fremtiden (Gensby & Husted 2013). Derudover peger en international forskningsoversigt om arbejdspladsers politikker og procedure for tilbagevenden til arbejde, på væsentlige potentialer, hvis virksomheder etablerer ledelsessystemer for tilbagevenden til arbejde (Gensby m.fl. 2014). Det danske samarbejdssystem indeholder i denne sammenhæng betydningsfulde ressourcer til at understøtte et sådant system.

Inddragelse af aktører på arbejdspladsen

Resultaterne viser også, at der var stor forskel på, hvilken betydning medarbejderne opfatter, at de forskellige aktører på arbejdspladsen havde for dem ift. håndteringen af deres situation på arbejdspladsen. Øverste ledelse, nærmeste leder samt arbejdsmiljørepræsentanten blev vurderet mere negativt af medarbejdere med psykisk sygdom, mens tillidsrepræsentanten oftere var involveret, men både blev oplevet positivt og negativt. Oftest var hverken arbejdsmiljørepræsentant eller tillidsrepræsentant dog involveret i forløbet, og på meget få arbejdspladser oplevede medarbejderen at Arbejdstilsynet havde været på inspektion.

Disse fund understøttes i både dansk og international litteratur, som bl.a. understreger lederes manglende viden og mangel på værktøjer ift. medarbejdere med mentale helbredsproblemer (ex. Coole m.fl. 2013, Tiedtke m.fl. 2014, Andersen m.fl. 2014), og at medarbejdere, som kommer tilbage på arbejdspladsen efter sygemeldinger, ofte oplever, at der er foretaget uønskede forandringer i deres arbejde, hvor de f.eks. får mindre ansvar og kontrol i deres arbejde. Derudover opleves problemer i forholdet til kollegerne (Mental Health Foundation 2006). Dette er problematisk, da forskning

gen har vist, at involvering af kollegerne i processen omkring sygemelding og tilbagevenden til arbejdet og fokus på generelle forebyggende tiltage i arbejdsmiljøet er vigtige parametre for, om en medarbejder kan vende tilbage til arbejdspladsen (Tjulin m.fl. 2010, Corbiere m.fl. 2014). Undersøgelsen peger således på vigtigheden af, at man på arbejdspladsen også fokuserer på kollegernes arbejdsmiljø, når en medarbejder er sygemeldt. 76,8 % af medarbejdere med psykisk sygdom vendte heller ikke tilbage til samme arbejdsplads, hvilket kan afspejle manglende ledelsesmæssig og kollegial støtte. Fremadrettet kan det derfor være hensigtsmæssigt på arbejdspladser at diskutere, hvordan kollegers behov afdækkes og understøttes i forhold til arbejdsrelateret sygdom både under en medarbejders sygemelding og i den efterfølgende periode.

Nærværende undersøgelse viste også, at arbejdsmiljørepræsentanten ofte ikke var involveret, selvom en medarbejder havde fået en arbejdsrelateret sygdom, og at 17,4 % med psykisk sygdom vurderede, at arbejdsmiljørepræsentanten havde haft en negativ betydning for dem i forløbet omkring deres sygdom og arbejdsskadeanmeldelse. I dansk kontekst viser forskning, at arbejdsmiljørepræsentanternes uddannelse muligvis ikke ruster dem til at arbejde med psykisk arbejdsmiljø (Ladegaard m.fl. 2016b), og at arbejdsmiljørepræsentanten ofte ikke er involveret, når medarbejdere bliver sygemeldt med arbejdsrelateret stress. Dette skyldes, at det som regel forbliver en privat sag mellem leder og medarbejder, når en medarbejder er sygemeldt uanset årsag (Ladegaard m.fl. 2012). Denne tendens ses ligeledes i en større svensk tværsnitsundersøgelse (Selander m.fl. 2015), der undersøgte sammenhængen mellem sygemeldte medarbejders forventninger til deres tilbagevenden til arbejde, og kvaliteten af kontakt mellem medarbejder og arbejdsplads

ved sygemelding. Studiet viste, at kvaliteten af kontakten og de handlinger, der blev gennemført på arbejdspladsen, var vigtigere for sygemeldte medarbejdere end f.eks. antallet af gange, man blev kontaktet, og timing for tilbagevenden til arbejde. Studiet viste ligeledes, at tillidsrepræsentanter og arbejdsmiljørepræsentanter havde en meget begrænset rolle i planlægning og implementering af indsatsen i forbindelse med sygemeldinger. Dette kan undre, da disse aktører kan have relevant viden i forhold til at understøtte beslutninger og handlinger på arbejdspladsen.

To til fire år efter, at de anmeldte deres sygdom, var en stor del af medarbejderne uden for arbejdsmarkedet. Undersøgelser viser, at langvarige sygemeldinger er en vigtig risikofaktor for tilbagetrækning fra arbejdsmarkedet (Waddel 2004), og kun 50% af de, som er væk fra arbejdet i mere end seks måneder pga. eks. dårligt mentalt helbred, vender tilbage til arbejdsmarkedet (Blank m.fl. 2008). En tidlig indsats og fastholdelse er derfor afgørende. I nærværende undersøgelse endte de fleste medarbejdere med psykisk sygdom og rygsygdom med at blive fyret.

I kun få tilfælde oplevede medarbejdere, at Arbejdstilsynet var kommet på tilsyn, selvom de havde anmeldt en arbejdsskade. Hvis denne medarbejdervurdering er retvisende, kan det undre, da netop arbejdsskadeanmeldelser også skulle have en forebyggende funktion på danske arbejdspladser og registreres af Arbejdstilsynet (Arbejdstilsynet 2017), og regulering har vist sig at have effekt på arbejdsmiljø og arbejdsmiljøindsatser (Andersen 2017). Forskning på området understøtter dette fund og viser at Arbejdstilsynet i yderst begrænset omfang gør brug af erhvervssygdoms-anmeldelserne (Ladegaard m.fl. 2016a). Resultaterne kalder på initiativer som f.eks. en tilpasning af lovgivningen på området

og det danske samarbejdssystem, så der kan igangsættes en dialog om arbejdsrelateret sygdom på arbejdspladsen og så incitamentet for, at virksomheder arbejder endnu mere systematisk med forebyggelse af arbejdsrelateret sygdom på et organisatorisk plan, kan øges.

Hudsygdomme håndteres bedst

Generelt vurderede medarbejdere med hudsygdomme arbejdspladsens indsats og de forskellige aktører fra arbejdspladserne mere positivt og rapporterede også om forandringer i arbejdsmiljøet i højere grad end medarbejdere med rygsygdom eller psykisk sygdom. Flere med hudsygdom blev også fastholdt på arbejdsmarkedet. Dette kan skyldes, at hudsygdomme ikke påvirker den samlede arbejdsevne i samme omfang som rygsygdomme og psykiske sygdomme, og dermed kan være lettere at håndtere. Ofte findes en direkte årsag til sygdommen (Sigsgaard 2010), som så kan medføre ændring af arbejdsprocedure eller omplacering af den pågældende medarbejder. Interventioner på både individ og organisatorisk niveau kan være billigere og mere simple for hudsygdomme, såsom indkøb af værnemidler som handsker, creme og ændringer til f.eks. brug af parfumefri produkter og håndsprit. I tilfælde af sygemelding kan tilbagevenden til arbejde også være mindre krævende og derved et kortvarigt forløb sammenlignet med psykisk sygdom og rygsygdom, hvor der kan være tvivl om, hvorvidt medarbejderen vil blive i stand til at varetage arbejdet igen, og hvor perioden med særbehov og omfanget af de særlige hensyn er større (Mental Health Foundation 2006).

Samlet set indikerer dette studie, at der er en række udfordringer på de danske arbejdspladser, i forbindelse med at en medarbejder får en arbejdsrelateret sygdom. Dette kan skyldes manglende viden og systematiske indsatser på arbejdspladsen.

Ifølge Arbejdsmiljøloven § 1.1. er danske arbejdsgivere forpligtede til at sikre et sundt og sikkert fysisk og psykisk arbejdsmiljø, og det kan undre, at intet i denne undersøgelse tyder på at der gennemføres en systematisk udredning eller kortlægning af arbejdsmiljøet, når en medarbejder bliver sygemeldt og det anmeldes som en arbejdsskade (erhvervssygdom). Der ligger oftest en faglig vurdering til grund for anmeldelsen (Arbejdsskadestyrelsen 2012), hvilket støtter op om, at sygdommen er forårsaget af arbejdet, at der derfor kan være vilkår på arbejdspladsen, som er belastende, og at der er behov for at undersøge potentielle problemer i arbejdsmiljøet. Nedsat arbejdsevne pga. dårligt helbred og sygdom er en stigende udfordring (World Health Organization 2011), som kan have væsentlige konsekvenser for både individet, f.eks. i form af nedsat livskvalitet (Fryers 2006), og for samfundet, f.eks. i form af øgede udgifter grundet tabt arbejdskraft (Sundhedsstyrelsen 2015, European Agency for Safety and Health at Work 2017). Derfor er der behov for indsatser, som kan støtte medarbejdere med arbejdsrelaterede sygdomme samt støtte danske arbejdspladser med henblik på at sikre et sundt og sikkert arbejdsmiljø.

Styrker & begrænsninger

Undersøgelsen er baseret på oplevelserne fra 770 medarbejdere med anmeldte erhvervssygdomme og giver derfor et unikt indblik i denne populations oplevelser på deres arbejdspladser, herunder hvordan danske arbejdspladser håndterer arbejdsrelateret sygdom. Medarbejdernes oplevelser blev undersøgt gennem en spørgeskemaundersøgelse udviklet på baggrund af en række medarbejder- og ekspertinterviews med henblik på at sikre, at relevante aspekter ved arbejdspladsers håndtering blev klarlagt og belyst. Resultaterne fra undersøgelsen

sen er selvrapporteret 2-4 år efter anmeldelsen af en arbejdsrelateret sygdom (anmeldt i 2010-2012). Man kan således overveje, om arbejdspladserne siden da er blevet bedre til at håndtere arbejdsrelateret sygdom. Interviewdata fra 2014 i samme projekt (Ladegaard m.fl. 2016a) indikerer dog, at arbejdspladserne stadig har vanskeligt ved at håndtere arbejdsrelateret sygdom, og der er ikke fundet nyere dansk litteratur på området, som tegner et mere optimistisk billede. En anden udfordring er, at medarbejderne bedes huske tilbage på noget, som er sket i en tidligere periode, og således kan deres oplevelser i forhold til arbejdspladsernes håndtering af deres arbejdsrelaterede sygdom være præget af, hvordan det efterfølgende er gået dem, for eksempel om de er aktive på arbejdsmarkedet eller ej, deres aktuelle helbredstilstand, og hvordan afgørelsen fra Arbejdsmarkedets Erhvervssikring faldt ud. For at imødekomme denne potentielle bias blev dette undersøgt særskilt (Bilag 1, tabel 2).

Forskelle i besvarelsenerne fundet mellem mænd og kvinder samt brancher kan afspejle, at der var flere kvinder med anmeldt psykisk sygdom, og at der også var flere med psykisk sygdom inden for branchegrupperne *uddannelse/sundhedssektor/institution samt politi/beredskab/forsvar/fængsel*. Det skal ligeledes bemærkes, at svarprocenten i de tre grupper varierede. Den højeste svarprocent var blandt medarbejdere med anmeldte psykiske sygdomme (60,5 %), i midten lå ryg sygdomme (50,5 %) mens den lavest svarprocent (33,0 %) var blandt medarbejdere med anmeldte hudsygdomme. Svarprocenten kan afspejle den enkeltes engagement i situationen, hvor de har været sygemeldt med en arbejdsrelateret sygdom. Undersøgelsens fund kan derfor være mere markante i både positiv og negativ retning. Ligeledes var fordelingen af medarbejdere med anerkendt psykisk sygdom 46,8 % og ryg sygdom 55,0 % lang højere end den virkelige fordeling,

hvor kun 4,1 % med psykisk sygdom og 13,8 % for ryg sygdom fik anerkendelse i 2016 (Arbejdsmarkedets Erhvervssikring 2017). Da man bl.a. kunne se, at medarbejdere med anerkendte arbejds-skader i højere grad oplevede forandringer i arbejdsmiljøet, kan man forestille sig, at undersøgelsens resultater ville vise endnu færre arbejdsmiljøtiltag ved en repræsentativ sample. Undersøgelsen er finansieret af Arbejdsmiljøforskningsfonden 2013-2018, og forfatterne har ingen interessekonflikter i forhold til artiklens resultater.

Konklusion

Undersøgelsen indikerer, at der er problemer med håndteringen og arbejdsmiljøindsatserne på de danske arbejdspladser, når en medarbejder bliver sygemeldt med en arbejdsrelateret sygdom. Flere medarbejdere med psykisk sygdom oplever, at arbejdspladsen håndterer forløbet omkring deres sygdom dårligt sammenlignet med medarbejdere med ryg- og hudsygdom. På trods af at arbejdspladsen har kendskab til, at en medarbejder er blevet syg grundet arbejdet, bliver der ifølge medarbejderne ikke foretaget ændringer i arbejdsmiljøet på mange arbejdspladser. Når der foretages ændringer, er det ofte ændringer i den enkelte medarbejders arbejde og ikke strukturelle forbedringer i arbejdsmiljøet. Medarbejdere med arbejdsrelateret psykisk sygdom vurderede øverste og nærmeste ledelse samt arbejdsmiljørepræsentantens betydning for forløbet omkring sygdommen mere negativt sammenlignet med medarbejdere med ryg- og hudsygdom. Ofte var hverken arbejdsmiljørepræsentant eller tillidsrepræsentant involveret i forløbet. Derudover oplevede medarbejderne sjældent inspektion fra Arbejdstilsynet, selvom de var blevet syge af arbejdet og i den forbindelse havde anmeldt en arbejds-skade.

Undersøgelsen viser desuden, at arbejds-

pladserne håndterer hudsygdommene bedst, hvilket kan skyldes, at hudsygdomme er lettere at håndtere og løsningerne simple og mindre omkostningstunge, sammenlignet med behovet når det drejer sig om rygsygdom eller psykisk sygdom. Medarbejdere med hudsygdomme blev i højere grad fastholdt på samme arbejdsplads, mens et stort antal medarbejdere med ryg- og psykiske sygdomme stod uden for arbejdsmarkedet 2-4 år efter de var blevet syge. Derudover oplevede mange med-

arbejdere at genoptage arbejdet for tidligt efter sygdommen.

Resultaterne kalder på initiativer som f.eks. en tilpasning af lovgivningen på området såvel som det danske samarbejdssystem, så man støtter dialog om arbejdsrelateret sygdom på arbejdspladsen yderligere og øger incitamentet for, at virksomheder arbejder mere systematisk med forebyggelse af arbejdsrelateret sygdom på et organisatorisk plan.

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Yun Ladegaard, cand.psych., projektleder, ph.d. studerende, Institut for Psykologi, Arbejds- & Organisationspsykologi, Københavns Universitet
e-mail: yun.ladegaard@psy.ku.dk

Cecilie Nørby Thisted, cand.scient.san.publ, ph.d. studerende, Folkesundhedsvidenskab, Aarhus Universitet
e-mail: cnth@ph.au.dk

Ulrik Gensby, cand.scient.adm, ph.d., forsker, Team Arbejdsliv Aps og Helix Competence Center, Lindköping Universitet
e-mail : uge@teamarbejdsliv.dk

Janne Skakon, cand.psych.aut., ph.d., ekstern lektor, Institut for Psykologi, Arbejds- & Organisationspsykologi, Københavns Universitet
e-mail: janne.skakon@psy.ku.dk

Bo Netterstrøm, dr.med.sci., seniorforsker
e-mail: bone@dadlnet.dk

APPENDIX 3. PAPER III

Ladegaard Yun, Skakon Janne, Ståhl Christian, Netterstrøm Bo

Employees with notified work-related mental disorders - experiences in the workplace and in the workers' compensation system

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Employees with notified work-related mental disorders - experiences in the workplace and in the workers' compensation system

Yun Ladegaard^{1,2}, Janne Skakon¹, Christian Ståhl^{3,4}, Bo Netterstrøm⁵

¹Department of Psychology, University of Copenhagen, Copenhagen, Denmark

² Centre for Mental Health Promotion, University of Copenhagen, Copenhagen, Denmark. ³ Department of Medical and Health Sciences Linköping University, Linköping, Sweden. ⁴ HELIX Competence Centre, Linköping University, Linköping, Sweden. ⁵ Department of Occupational and Environmental Medicine, Bispebjerg University Hospital, Copenhagen, Denmark

Abstract

Purpose: Workers' compensation claims of work-related mental disorders are increasing in many countries, but a large number of claims are rejected. Literature suggests that compensation processes are bad for health and attachment to the labour market, but limited attention has been paid to the process itself, which varies between jurisdictions. This study investigates how employees with notified work-related mental disorders experience contacts with the workplace and the Danish Workers' Compensation System. *Methods:* Interview data (N=13) and questionnaire data (N=436) from employees with a notified occupational mental disorder were analysed. Interviews were collected and analysed by applying principles from grounded theory, and questionnaire data were analysed using chi-squared tests. *Results:* Half of the employees with notified work-related mental disorders had the goal that the workers' compensation claim would contribute to improving the working environment and could prevent others from becoming sick because of the same working conditions. However, there seems to be a lack of preventive health and safety initiatives in workplaces, central stakeholders such as health and safety representatives are often not involved, and management involvement was experienced negatively by most employees. The Danish Working Environment Authority rarely conducts workplace inspections and employees experienced not being adequately informed about the workers compensation process and found the compensation schemes hard to fill out. *Conclusions:* Increased interaction between the Workers' Compensation Systems, the Work Environmental Authority, and workplaces might be needed, if workers' compensation claims are to have more preventive impact at workplaces.

Keywords: *Workers compensation, Mental disorders, Prevention, Psychosocial work environment, Inspections*

A growing number of workers' compensation claims of mental disorders, such as work-related stress or depression, have been registered in Europe [1], and in Australia, work-related stress is the second most common type of claim [2]. Psychosocial hazards are widely recognized as major challenges to occupational health and safety, and there is comprehensive evidence of the impact of psychosocial hazards on a number of health outcomes [3]. For example, there is robust evidence that high psychological demands and low decision latitude (job strain) [4,5], or bullying [4,6] have a significant impact on mental health and the development of mental disorders. Additionally, increased risk of depressive disorders has been found for employees exposed to effort–reward imbalance [7]. Furthermore, there is increased risk for the development of mental disorders for employees exposed to work-related violence [8,9], and a relation between the psychological demands of a job and development of depression has been found [10].

Mental disorders are related to functional disability in all domains of functioning [11], are a common cause of work disability [12], represent a major risk factor for early withdrawal from the labour market [13], and now comprise the largest diagnostic group in many developed countries [14]. The exact prevalence of work-related mental disorders is unknown and current estimations are primarily reliant on self-reported surveys. For example, twenty-five percent of employees surveyed in Europe state that they experience work-related stress during most or all of their working hours and that their work has an adverse effect on their health [15]. In Europe it is commonly accepted that psychosocial hazards can affect the mental health of employees [3] and the International Labour Organization has acknowledged that psychosocial hazards can cause occupational disease [16]. However, mental health disorders such as depression are generally not acknowledged as occupational diseases covered by the workers' compensation systems in most countries, and there is no general consensus on the question of recognition of mental health claims [1].

Danish context

In Denmark, there has been a 50% increase in notified work-related mental disorders from 2010-2016, however, only 4.1% of the notified mental disorders were recognized in 2016 [17]. The large number of rejections is primarily because of limited medical evidence demonstrating a correlation between workplace conditions and mental disorders [18], challenges in demonstrating causality and documenting exposure, as well as the multifactorial nature of mental disorders [1].

The Workers' Compensation System in Denmark was established in 1898 as a no-fault system, is financed by employers, and covers employees working in Denmark for disability, death, wage loss, and medical expenses [19]. Physicians and dentists in Denmark are obligated by law to notify if they have a suspicion that a disease may have been caused by working conditions [20]. The Workers' Compensation System exists in parallel with the healthcare system and the social security system, and was developed to insure employees with physical diseases/injuries. In Denmark, workers' compensation claims are submitted to both the Danish Working Environment Authority and Labour Market Insurance, and serve two functions: First, the Danish Working Environment Authority receives information about working conditions that are believed to have led to disease/injury—information can be used to develop preventive initiatives at the worksite or industry—and second, the Labour Market Insurance assesses whether the disease/injury can be recognized and whether compensation can be granted [20].

Since work-related mental disorders, such as work-related stress or depression, are rather new in workers' compensation systems and the claims in a majority of cases are rejected [1], it is important to explore the employees' experiences in relation to this. Studies have shown that the notification of an occupational disease in workers' compensation systems may have the unintended side effect of increasing the risk of work disability [21] and has been linked to a worse prognosis [22–24], worse recovery [25], and health-related job loss [26]. However, epidemiological research in the field has been criticized for methodological weaknesses [27,28]. Recently, qualitative studies and reviews have concluded that the workers' compensation claim process is perceived as stressful by sick employees [27], and interactions with key stakeholders in the compensation system, such as insurers [29] and health care providers [30] can affect employees' recovery negatively. Further administrative hurdles in workers' compensation claims have been associated with higher mental health complaints [27]. Since most studies of effects of claim processes have been carried out in

North America or Australia, studies in a European context are called for, because the effects on health and return to work may be different because of alternative insurance systems, for example, a sickness insurance system provides income replacement and support for the return to work process. This study explores experiences of employees with notified work-related mental disorders, in the workplace and in the workers' compensation system.

Methods

An exploratory sequential mixed-method research design [31] was applied for data collection. First, the field was explored through semi-structured interviews (N=13), after which the generalisability of the most salient findings was examined in a larger population through a questionnaire-based survey (N=436). All employees had a notified mental disorder registered in the Danish Workers' Compensation System. In Denmark, workers' compensation claims of diseases are typically made by health care professionals such as general or occupational physicians and psychologists. Thus, a notification will typically be based on a professional estimate that the mental disorder is at least partly caused by the working conditions [32].

Interviews

Data were collected during the period 2014–2015. Thirteen exploratory semi-structured interviews were conducted, each lasting approximately one hour, with employees notified with a work-related mental disorder. The employees were recruited from 2 January 2014 onwards by occupational physicians, at the Department of Occupational and Environmental Medicine at Bispebjerg University Hospital, Denmark. Inclusion criteria were defined as follows: Significant symptoms as a result of a work-related mental disorder, being notified with a work-related mental disorder, and being employed when the disease started. Exclusion criteria were as follows: Current abuse of alcohol or psychoactive stimulants, major psychiatric disorder or significant somatic disorder assumed to be the primary cause of the mental disorder, the person being potentially unpredictable or dangerous. Participants were contacted by phone by the first author, interviewed in their home or at the University of Copenhagen, completed a consent form before the interview, and were given the opportunity to withdraw their data at any time.

Table 1. Characteristics of 13 patients with notified work-related mental disorders from the Department of Occupational Medicine, interviewed in 2014

No.	Gender	Workplace/Industry	Job	Age	Diagnosis	Workers compensation claim	Follow-up interview 2 years after
1	F	Funeral company	Undertaker	54	Stress reaction	X	
2	F	Catering company	Coordinator	43	Stress reaction	X	
3	M	Construction company	Project leader	54	Stress reaction /depression	X	
4	F	Military - public sector	Office assistant	39	PTSD/depression	X	
5	F	School – public sector	Teacher	36	PTSD	X	
6	F	School – public sector	Teacher	43	Stress reaction	X	
7	F	Hospital – public sector	Nurse	42	PTSD/Depression	X	X
8	F	Hotel	Waitress	36	Stress reaction	X	
9	F	Shop	Sales assistant	44	Stress reaction	X	X
10	M	Production company	Factory worker	62	PTSD/depression	X	X
11	F	Military – public sector	Sergeant	32	PTSD	X	
12	F	After School Club – public sector	Teacher	48	PTSD/depression	X	X
13	F	IT company	IT Programmer	57	Stress reaction	X	

The interviews focused on the employees' experiences of the development of the mental disorder, the processes at the workplace including the workplace stakeholders, the manner in which the workplace handled the sick leave and the return to work process, the process in the workers' compensation system, various stakeholders in the workers' compensation system, including the Working Environment Authority, and the employees' expectations and motivation behind the claim. Interviews were recorded, transcribed verbatim, and coded in NVivo 10 through open- and selective coding, and with memo writing [33].

Questionnaire Survey

The questionnaire was designed on the basis of the interview data and pilot tested according to the principles set out by Boynton [34]. First five employees notified with a work-related mental disorder tested the questionnaire and provided feedback. Based on the feedback, the questionnaire was revised. Next, 13 employees tested the online version of the questionnaire and provided feedback, which led to the final version used in this study.

Employees with a notified work-related mental disorder from 2010–2012 were selected through a randomized withdrawal from the database of the Danish Labour Market Insurance. Since post-traumatic stress disorder (PTSD) was the only mental disease on the List of Occupational Diseases (other disorders could be recognized by the Occupational Disease Committee under a complementary system, but registration on the list allowed faster and smoother management of claims [1]), the selection of employees with work-related mental disorders was randomized in four groups: 1) Recognized claims excluding PTSD (121, i.e. all who fulfilled inclusion criteria), 2) recognized claims including PTSD (N=200), 3) rejected claims excluding PTSD (N=200), 4) rejected claims including PTSD (N=200). An employee could only be included in one group, and employees with pre-existing claims were excluded. After the withdrawal, the four groups were merged into two groups, employees with recognized (N=321) and rejected (N=400) claims.

In December 2014, the employees were contacted and asked if they wanted to participate, in a letter with a description of the study and a personal code to an online questionnaire. A month later a reminder was sent out, where the option to fill in the questionnaire on paper was included. Of those contacted, 60.5% responded. A dropout analysis (Table 2) showed that the respondent group was significantly older, and had more women and more workers diagnosed with stress etc. compared to dropouts. Additionally, there were differences in relation to industries. No significant differences were found related to recognized claims or economic compensation.

The questionnaire consisted of 40 questions and a number of sub-questions; both scales and open-response categories were used. Answers from the questionnaire were analysed using chi-squared tests to see the differences between responders and non-responders in the dropout analysis. Differences between employees with different diagnoses and recognized/rejected claims were tested using chi-squared tests in relation to the responses to the questionnaire. The answers to the open-response categories were analysed through selective coding.

Table 2. Characteristics of 436 employees with a notified work-related mental disorder who completed the research questionnaire and 285 potential participants who did not.

	Participated (N=436)	Dropout (N=285)	P
Women	72.5	61.1	0.001
Agegroups			
<40	20.0	36.1	<0.001
40-55	51.4	46.3	
>55	28.7	17.5	
Recognized Claim	46.8	41.1	0.130
Diagnosis			
PTSD	14.4	22.1	0.024
Depression	22.0	22.1	
Stress etc.	63.5	55.8	
Compensation from workers compensation system	35.6	33.0	0.214
Industry			
Service sector	42.4	43.5	0.003
Education/ /healthcare, daycare	39.2	31.6	
Production, crafts, agriculture	6.0	3.9	
Police, military, prisons	10.8	20.4	
Unknown	1.6	0.7	

Table 3. Sociodemographic and employment characteristics, and claim status among the 436 participants

	Total (N=436)	PTSD ¹ (N=63)	Depres sion ² (N=96)	Stress etc. ³ (N=277)	P	Recog- nized (N=204)	Rejec- ted (N=232)	P
Women	72.5	54.0	66.7	78.7	<0.001	63.2	80.6	<0.001
Age groups								
<40	20.0	23.8	13.5	21.3	0.411	20.1	19.8	0.360
40-55	51.4	49.2	58.3	49.5				
>55	28.7	27.0	28.1	29.2				
Decision - Recognized	46.8	95.2	51.0	34.3	<0.001	100.0	0.0	<0.001
Compensation from Workers Compensation System	35.6	84.1	33.3	25.3	<0.001	76.0	0.0	<0.001
Employment – time of notification								
Permanent employed	92.2	93.7	93.7	91.7	0.903	92.6	91.8	0.447
Payed by the hour	5.0	3.2	4.2	5.8				

Higher education completed								
Non	8.9	12.7	6.3	9.0	0.559	8.8	9.1	0.777
Short	30.5	33.3	33.3	28.9		28.9	31.9	
Academics	60.6	54.0	60.4	62.1		62.3	59.1	
Industry								
Service	42.4	28.6	49.0	43.3	<0.001	31.4	52.2	<0.001
Education/health	39.2	41.3	33.3	40.8		43.6	35.3	
Industri, crafts, agriculture	6.0	0.0	10.4	5.8		4.4	7.3	
Police, defence, jail	10.8	30.2	6.3	7.9		19.6	3.0	
Reporting bad health	47.5	57.1	58.3	41.5	0.004	62.7	34.1	<0.001
Longterm sick leave >8 weeks	70.2	69.8	80.2	66.8	0.172	71.6	69.0	0.479
Seniority								
<1 year	5.7	6.3	3.1	6.5	0.275	3.4	7.8	0.178
1-9 years	61.9	60.3	57.3	63.9		63.2	60.8	
>9 years	30.7	31.7	39.6	27.4		32.4	29.3	
Employed at the same workplace 2-4 years after notification	23.2	19.0	19.8	25.3	0.260	23.5	22.8	0.943
Current work situation								
Private organization	17.0	14.3	17.7	17.3	0.022	10.8	22.4	0.001
Public organization	40.1	28.6	33.3	45.1		37.7	42.2	
Education	3.7	4.8	1.0	4.3		3.4	3.9	
Out of the labor market	39.2	52.4	47.9	33.2		48.0	31.5	

¹Post-traumatic stress disorder, F43.1 (N=63). ²Depression F33 and F32 (N=96). ³Stress etc.: Adjustment disorders, F43.2-F43.9 (N=161), Stress without specification, Z (N=96), anxiety (N=4), F41 and non- specified psychiatric disease (N=16).

Results

The following section presents results from the employee interviews and the questionnaire responses divided in four themes: A) Prevention in the work environment was an aim. B) Problems poorly handled in the workplace. C) Challenges in relation to workplace inspections. D) Experiences in the workers' compensation system.

Table 4. Assessment of factors related to the work place and workers' compensation system made by 436 employees with notified work related mental disorders

A. What was most important for you to gain from the workers compensation claim?¹								
	Total	PTSD	Depres- -sion	Stress etc.	P	Recog- nized	Rejec- ted	P
Possibilities for rehabilitation	7.3	19.0	6.3	5.1	0.001	10.3	4.7	0.027
Compensation from the WCS	23.9	34.9	30.2	19.1	0.008	29.4	19.0	0.011
That the notification contribute to change the workers compensation system	17.2	6.3	17.7	19.5	0.044	10.8	22.8	0.001
To prevent it from happening for other workers in the future	51.1	34.9	51.0	54.9	0.017	48.0	53.9	0.224
To register the disease as a precaution in the event that it later worsens	49.5	38.1	49.0	52.3	0.123	44.1	54.3	0.034
B. How did your workplace handle the process when you got sick?								
Good	26.6	42.9	27.1	22.7	0.003	32.4	21.6	0.021
Bad	68.8	49.2	71.9	72.2		62.3	74.6	
Other answers	4.6	7.9	1.0	5.1		5.4	3.9	
C. How significant were the following people at your former workplace to you during your illness and workers' compensation claim?								
Top management								
Positive	12.2	17.5	12.5	10.8	0.019	13.7	10.8	0.184
Neutral	16.7	28.6	12.5	15.5		20.1	13.8	
Negative	46.6	30.2	43.8	51.3		45.1	47.8	
Not involved/other	24.5	23.8	31.3	22.4		21.1	27.6	
Line manager								
Positive	18.8	30.2	18.8	16.2	0.078	23.0	15.1	0.032
Neutral	15.1	15.9	12.5	15.9		18.1	12.5	
Negative	52.3	34.9	52.1	56.3		44.6	59.1	
Not involved/other	13.8	19.1	16.7	11.6		14.3	13.3	
Union representative								
Positive	23.9	23.8	18.8	25.6	0.496	27.0	21.1	0.554
Neutral	19.7	25.4	17.7	19.1		20.6	19.0	
Negative	15.8	9.5	14.6	17.7		14.7	16.8	
Not involved/other	40.6	41.3	49.0	37.5		37.7	43.1	
Health and safety representative								
Positive	12.4	19.0	8.3	12.3	0.451	16.7	8.6	0.101
Neutral	19.5	23.8	16.7	19.5		19.6	19.4	
Negative	17.4	15.9	18.8	17.3		18.1	16.8	
Not involved/other	50.7	41.3	56.3	50.9		45.6	52.2	
Colleagues								
Positive	44.5	52.4	39.6	44.4	0.071	51.0	38.8	0.152
Neutral	22.0	23.8	17.7	23.1		20.1	23.7	
Negative	17.2	4.8	21.9	18.4		14.7	19.4	
Not involved/other	16.2	19.1	20.9	14.1		14.2	18.1	
D. Were any changes made to your working environment in relation to your illness?								
Yes	12.4	15.9	14.6	10.8	0.385	16.2	9.1	0.018

¹In the survey participants could choose maximum tree answers to this question. Most participants answered that *a recognition/documentation to prove that I got sick due to work* was one of the most important aims with the workers compensation claim, however this result is not presented here since it's not within the scope of this article.

Somewhat	17.9	14.3	15.6	19.5		19.6	16.4	
No	55.0	47.6	57.3	56.0		47.5	61.6	
Don't know	14.7	22.2	12.5	13.7		16.7	12.9	
E. Has the Danish Working Environment Authority carried out an inspection at your workplace as a result of your claim?								
Yes/somewhat	8.3	4.8	4.1	10.4	0.135	12.2	4.7	0.029
No	60.1	54.0	59.4	61.7		55.9	63.8	
Don't know/other answers	31.7	41.3	36.5	27.8		31.9	31.5	
F. Did you feel adequately informed about the workers compensation process?								
Yes	22.2	31.7	26.0	18.8	0.062	27.5	17.7	0.019
Somewhat	30.3	34.9	31.3	28.9		31.4	29.3	
No	41.1	31.7	38.5	44.0		37.3	44.4	
Don't know/other	6.4	1.6	4.2	8.3		3.9	8.6	
G. How was it to fill out the compensation schemes								
Easy	8.0	6.3	7.3	8.7	0.337	9.3	6.9	0.001
Neutral	22.0	15.9	21.9	23.5		22.5	21.6	
Hard	45.6	58.7	49.0	41.5		52.5	39.7	
Don't remember/other answers	24.3	19.0	21.9	26.4		15.7	31.9	
H. Did the process in relation to your workers compensation claim hinder or delay your return to the labour market?								
Yes/Somewhat	17.7	15.8	17.7	18.1	0.584	26.5	9.9	<0.001
No	69.5	66.7	71.1	69.3		61.3	76.7	
Don't know/not relevant	12.8	17.5	10.4	12.6		12.3	13.4	

Prevention in the work environment was an aim

Even though Danish legislation requires physicians to notify a disease if there is a suspicion that it was caused by working conditions, most of the interviewed employees perceived the workers' compensation claim as an active choice. In the survey, most employees answered that they wanted documentation to prove that they got sick due to work, and only 23.9% of the replies indicated that financial compensation was one of the most important purposes of the claim, although the number was significantly higher for those with recognized claims. However, 51.1% of the respondents answered that one of the most important purposes of the claim was to prevent something similar happening to other employees in the future (Table 4, A). This was supported by interview data, where most of the respondents already knew that they would probably not receive any compensation. Although they were still hoping for recognition and compensation, they had a strong focus on the problematic working conditions and found it important to make a compensation claim to draw attention to the problems (Table 5, theme A).

Table 5. Overview of themes from interviews with 13 employees with notified work related mental disorders on their experiences in the workplace and the workers' compensation system

Themes	Examples of citations from the dataset
A. Prevention in the work environment was an aim	<p><i>'I think it is such an incredibly important issue; also, if the same thing happens to other people, I have to set an example because there are a lot of problems among teachers... and I would really like to put a stop to it. It's also going to happen to someone else after me.'</i> (P12)</p>
<p>B. Problems poorly handled in the workplace</p> <p><i>Health and safety representatives not helpful</i></p>	<p><i>[After the employee and her colleague had expressed concern about a demanding psychosocial work environment to the manager] 'We were sent to a seminar with a coach... the manager wanted us to be one big family. Then I said "it's not just about being a big family, it's also about my daily life, and my private time", but she [the manager] did not see it that way. She simply meant we should be available. We could go 13 days without a day off and when I say 13 days it's twenty-four seven. Try to work 13 days and be available. You may be sitting at home with phones and computers, but you're still on, right? And in a split second, you have to be able to turn around and be in sorrow, not in sorrow, but you must talk to people who are in sorrow.'</i> (P1)</p> <p><i>'No changes even though I was number five in a row'</i> (Questionnaire respond, Sales assistant)</p> <p><i>'In my case, it was bullying... from my closest colleague, and nothing was done to put a stop to it... Management's solution was to force me to be redeployed to another location in the municipality.'</i> (Questionnaire respond, Social worker)</p> <p><i>'When I came back after 4 months, I started working in a different department. Now I'm back working in the same department again, and the psychosocial working environment has just gone worse.'</i> (Questionnaire respond, Office clerk)</p> <p>Two of the employees interviewed were health and safety representatives and experienced having no access to help at the workplace during sick leave. Only one employee experienced the health and safety representatives' involvement as positive. The rest had the experience that the health and safety representatives were either not involved or involved in a negative way.</p> <p>Interviewer: <i>'Have the health and safety organization at the school been involved?'</i> Interviewee: <i>'No and it has been a part of the problem, because we [the teacher and some colleagues] have asked our health and safety representative and the union for help... our health and safety representative, when we have asked her to report this and this incidents at work, because in most cases it has been so severe that we have had a couple of days of sick leave afterwards [the attacks from a kid], but she has not reported it, just talked herself out of it. I don't quite know how to report it', then we went to the manager and asked for it to be reported as a workplace injury, but he said it was supposed to [be done] by the health and safety representative, so we have been captured in their internal conflict.'</i> (P5)</p>
C. Challenges in relation to workplace inspections	<p><i>'It was [the compensation claim] in order to get the Working Environment Authority to come out and look at the working conditions... The whole time I just expected that they would contact the employer, that they would simply look into it... Why don't the WEA come out here? Is it because they think there are dead people all over the place?'</i> (P1)</p> <p><i>'The Danish Working Environment Authority has been in my section. But they were also just walked through fairly easily and without talking too much to the employees. So they ...concluded that everything had been carried out by the book, everything was completely in order and fine, and they didn't have any comments at all.'</i> (P7)</p> <p><i>'So the woman from the Danish Working Environment Authority says: 'Is there anything wrong with you? And I just thought, should I say something now? But I could not bring myself to say anything, as I was also afraid of my manager, of course. So I</i></p>

	<p>said 'no'. (P12)</p> <p><i>'It was like a slap in the face when, during one of my night shifts, I read the e-mail[the workplace got a green smile – approval from the WEA] which had been sent round. It was like being told that because you don't want to be physically assaulted every week by a boy and be spat at and have your hair pulled and be kicked black and blue all over, that it's all just me whining and making up a load of rubbish. And to be told afterwards by the parents that everything you did was wrong. And then you get an email saying that everything was fine, and we should accept that it just goes with the job.'</i> (P7)</p>
<p>D. Experiences in the workers compensation system</p> <p>Claim process perceived as demanding</p> <p>Lack of trust in the system</p>	<p><i>'I have not had the energy for it. It has been something like, "now you have to pull yourself together, today you will find out about this and this [information for the workers compensation claim scheme]" it has taken the whole days to find out stuff. I think it has been tough. It's like they don't want to. I think they [The Labour Market Insurance] are spending more time investigating if there may be other things causing this, than they spend looking at the problem...why don't they go to the workplace, why are not they out and see how it works? If you do not believe me, go ahead and look, be there a whole day, after half a day you know how it works. I get angry, because I spend a lot of time documenting things where if they just went out there for one single day, they would have all the information needed.'</i> (P1)</p> <p>Interviewee: <i>'I did not realize there were so many things, and so many papers [to fill out]. I simply did not know before it started to flip through the door with papers and papers and papers.'</i></p> <p>Interviewer: <i>'How have you experienced it, getting all these questionnaires?'</i></p> <p>Interviewee: <i>'Yes, it's been confusing because I do not know what to do, what to write and what not to write. Especially now, when it's coming [questionnaires] again, it's almost the same they ask. So, I do not know why [curse] they want the same information again.'</i> (P10)</p> <p><i>'I sort of thought, they're spending more time trying to find out if there might be other things causing the problem than they are actually looking at the problem... Why don't they go out and look at the workplace, why aren't they out looking at how things are going there? If you don't believe me, just drive out and have a look... you spend half a day there and you'll realise what's going on... It's like I constantly have to explain something about myself or have to prove something, I have to dig up stuff about my past ... I think it is tough.'</i> (P1)</p>

Problems poorly handled in the workplace

A total of 68.8% of employees thought that their workplace had handled the process poorly when they became sick. More employees with PTSD and with recognized claims thought that the workplace had handled the process well, compared to the other groups (Table 4, B). Most respondents assessed the management's handling of the process surrounding the disorder and the compensation claim as 'negative' (Table 4, C). In addition, the results showed that health and safety representatives were not involved in half of the cases even though an employee was sick with a work-related disorder, and when they were involved more employees experienced this negatively than positively. Colleagues and union representatives were perceived most positively (Table 4, C). Despite wanting the claim to have a preventive effect at the workplace, 55.0% of respondents in the survey answered that no changes were made in the working environment as a result of their work-related disorder. Only 12.4% answered that changes were made in the working environment, while 17.9% answered 'somewhat' (Table 4, D). Comments in the questionnaires showed that 'somewhat' could mean inadequate changes, for example, those only affecting the individual employee such as reducing or changing the employee's assignments, rather than interventions in the working environment as a whole. Additionally, several respondents experienced not being involved in the decisions about the changes (Table 5, theme B). More employees with recognized claims experienced changes in the working environment (Table 4, D).

Challenges in relation to workplace inspections

The interviewed employees were focused on the workers' compensation claims' preventive function and knew that their claims went to the Working Environment Authority, and for some, this was part of the motivation behind the claim (Table 5, theme C). However, in the survey, only 8.3% were aware of any inspection being carried out by the Working Environment Authority (Table 4, E). More employees with recognized claims experienced inspections; however, of those reporting that the Working Environment Authority had inspected the workplace, almost one third explained that the inspection had had a negative or neutral effect [35]. These results were in line with the interview data, where only three of the employees interviewed said that their workplace had had an inspection from the Working Environment Authority. All three talked about how

they regarded the Working Environment Authority's inspection as inadequate and problematic (Table 5, theme C).

Several of the employees described how management accompanied the Work Environment Authority around the workplace, which meant that the employees did not feel that they were given a real opportunity to give objective or critical perspectives, especially if the problems experienced in the working environment involved management (Table 5, theme C). One of the interviewed employees who had had a visit from the Work Environment Authority's inspectors expressed disappointment about the Work Environment Authority's lack of decisions following the visit, as this could be interpreted by managers and employees as a 'seal of approval' to the company's working environment. This was in sharp contrast to the employees' own experiences. The employee experienced that this seal of approval would signal that it was the employees on sick leave who had personal problems, as they were not able to cope with the 'approved working conditions' (Table 5, theme C).

Experiences in the workers' compensation system

17.7% of the respondents in the survey stated that the workers' compensation claim process had either prevented or delayed them from being able to return to work (Table 4, H). 41.1% reported that they had not been sufficiently informed about the process in the Workers' Compensation System, whereas more with recognized claims did receive sufficient information about the process (Table 4, F). 45.6% of the respondents noted that the compensation schemes were hard to fill out (Table 4, G). In the interviews, several employees talked about technical issues as well as questions not fitting when applied to descriptions of psychosocial hazards. Their experience was that the schemes were designed for physical exposures/diseases. A considerable amount of time and energy was invested in the claim processes to complete questionnaires, medical forms, etc. (Table 5, theme D).

Within 2–4 years after the notification, 23.2% of the employees answering the questionnaires were still employed at the same workplace, while 39.2% were not in the labour market, and there was a significant difference between the diagnosis groups, where most employees with PTSD and depression were out of the labour market (Table 3). Instead of contributing to enlightening the problems in the work environment, employees with work-related mental disorders could

experience being treated as ‘the problem’ themselves (Table 5, theme D). They had to go through a demanding process delivering documentation to the workers’ compensation system to prove that they were sick because of the working conditions, and they often experienced a lack of preventive health and safety initiatives at the workplace.

Discussion

One of the most important motivations behind workers’ compensation claims was the hope that the claim would lead to preventive interventions at the workplace, to prevent others from becoming sick in the future. More employees with depression or stress, etc. were motivated towards prevention compared to employees with PTSD. Stakeholders at the workplace such as health and safety representatives were often not involved, and if they were involved, more employees experienced it negatively than employees experiencing it positively. Management involvement was experienced negatively by most employees. Employees rarely found that their claim resulted in a workplace inspection, even though this could be an important motivation behind the claim. Additionally, inspections leading to no decisions could be experienced negatively by sick employees. Work-related mental disorders rarely led to changes in the work environment but more employees with recognized claims experienced changes compared to employees with rejected claims. Finally, the claim process was perceived as demanding, compensation schemes could be hard to fill out, and almost half of the employees did not feel adequately informed about the process in the Workers’ Compensation System. More employees with recognized claims experienced that the claim process had hindered or delayed their return to work compared to employees with rejected claims.

Line managers have been identified as the main stakeholder in relation to sick-listed employees’ return to work [36]. However, several studies have found that managers lack both the knowledge and the organizational support to effectively manage the return to work process [37,38], and managers may feel poorly prepared and isolated because of a lack of training and support [39]. Additionally, plans for the return to work processes often fail to be implemented for employees on sick leave due to mental disorders [40]. These previous results were also reflected in the current study, where the respondents reported negative experiences in relation to stakeholder involvement. Health and safety representatives were often not involved when an employee had a

work-related mental disorder, and if they were involved, more employees experienced this as negative than as positive. Research has suggested that the educational level of health and safety representatives in the area of the psychosocial work environment may be rather low or varied [41]. A low level of competence may explain why some employees with work-related mental disorders could experience this stakeholder negatively and point towards possible areas for action. Additionally managers have been found to perceive sick-leave as something which should be handled between employee and manager, rather than on a workplace level [39]. This perception might explain why other stakeholders were often not involved. This is a problem, since management of work-related mental disorders depends on the involved actors being able to coordinate efforts and exchange important information about adapting work and working conditions [42]. Furthermore, recognition and acceptance of the disorder as well as experiencing the disorder as legitimate and receiving social support is essential for the sick employee and their possibilities for return to work [43]. Several studies suggest a more systematic risk assessment approach in these situations and professional support for organizations is needed [3].

A recent review [24] has noted that psychosocial issues are generally not well dealt with in either courts or inspectorates, that inspectorates are often under-resourced, and that inspectors tend to hesitate to apply enforcement when there is a low likelihood for conviction. The current study reveals the consequences of this, seen from the sick employees' perspective. A report by the Danish National Audit Office, has pointed out that extensive limitations exist, limiting inspectors to inspecting and giving decisions on several aspects of the psychosocial work environment, regardless of whether employees get sick from the working conditions.

Employees diagnosed with PTSD experienced management involvement more positively when compared to employees with depression or stress. This might have to do with the inherent difference in the nature of the exposure that leads to the various diagnoses and interpersonal aspects of the exposure [45]. PTSD is easier to objectively assess compared to adjustment disorders for example, where it can be difficult to identify the precise causes due to the variability of psychosocial hazards and the interaction between them [46]. Thus, the issue of placing responsibility and potential interpersonal conflicts in relation to this, may be less current in relation to PTSD as compared to work-related stress or depression. This may partly explain why employees with stress or depression etc. more often had negative experiences in the workplaces than those with

PTSD. Additionally, employees with PTSD were often employed in organizations (e.g. the military or the police) with access to professional organizational support, such as debriefing or psychological counselling. Some of the employees with PTSD will be veterans, who in Denmark have access to a comprehensive support system, such as specialized treatment facilities and support for workers' compensation claims.

Methodological considerations

Our study included 436 employees with a notified work-related mental disorder and, therefore, provides unique information about this population's experiences. The questions in the questionnaire were developed through an exploratory interview study. The mixed-method design provides both in-depth information about the employees' experiences and the possibility to generalize the findings to a larger sample [31].

The respondents to the survey were selected and randomized in groups to be able to compare recognized and rejected cases. However, the sample was not representative since 46.8% of the respondents had their claim recognized by the Danish Labour Market Insurance, whereas only 4.1% of all employees with notified work-related mental disorders had their claim recognized in 2016. This might imply that issues highlighted in the article may be different in a representative sample. The study relied primarily on self-reported questionnaire data reported 2–4 years after the notification, and many of the participants had bad self-reported health at the time of answering the questionnaire, which might have enhanced the risk of reporting bias [47,48]. Dropout analysis (Table 2) and additional analyses of potential confounders including gender, age group, educational level, industry, and self-reported health at the response time have been conducted. These analyses showed significant differences in relation to the following: More women experienced the involvement of colleagues negatively and more men reported that colleagues were not involved in the process related to them getting sick and filling a compensation claim. More employees in education/healthcare had experienced inspections from the Work Environmental Authority, compared to other industries. More women and employees with bad self-reported health found it hard to fill out the compensation schemes, and more men and employees with bad self-reported health reported that the process with the workers compensation had hindered or delayed their return to work. These findings may however reflect the distribution of age, gender, and industry for example, in the diagnosis group since more men and employees in police/jail/defence

had PTSD, and more women had stress etc. Differences in answers between employees with good vs. bad self-reported health were seldom significant, indicating limited reporting bias in relation to current health status. All study participants provided informed consent.

Conclusions and implications

Employees with a notified work-related mental disorder who have become sick due to the psychosocial working environment believe that submitting a claim will contribute to improving the working environment; thus, they wish to prevent others from getting sick from the same unhealthy psychosocial working conditions. However, preventive health and safety initiatives at the workplace seem to be limited and central stakeholders, such as health and safety representatives and union representatives, are often not involved. Furthermore, management involvement was experienced negatively by most employees. Workplace inspections were seldom carried out and this gave rise to a number of unfulfilled expectations on the part of the employees. Finally, the claim process was perceived as demanding, compensation schemes could be hard to fill out, and many employees felt inadequately informed about the workers compensation process.

Practical implications

Workers compensation claims of mental disorders contain valuable information about current problems with the working environment, which could be integrated in the Work Environmental Authority to a much greater extent than is the case today. This information could be useful to inspectors in preparing and carrying out inspections, and informing subsequent workplace interventions. Additionally, the processes in the Workers' Compensation System should be evaluated based on the experience of the sick employees and adapted to ensure that the system supports employees' health, rehabilitation, and return to the labour market. An increased interaction between the Workers' Compensation Systems, the Work Environmental Authority, and workplaces might be needed if workers' compensation claims should have more preventive impact at the workplaces.

Conflict of Interest: The authors declare no conflict of interests.

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APPENDIX 4. PAPER IV

Ladegaard Yun, Conway Paul Maurice, Eller Nanna Hurwich, Skakon Janne, Maltesen Thomas Scheike Thomas and Netterstrøm Bo

Is the notification of an occupational mental disorder associated with changes in health, income and long-term sickness absence?

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Is the notification of an occupational mental disorder associated with changes in health, annual income and long-term sickness absence?

Yun Ladegaard¹, Paul Maurice Conway¹, Nanna Hurwich Eller², Janne Skakon¹, Thomas Maltesen³, Thomas Scheike³ and Bo Netterstrøm²

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Affiliations:

- 1) Institute of Psychology, University of Copenhagen, Øster Farimagsgade 2A, 1353 Copenhagen K, Denmark
 - 2) Department of Occupational and Environmental Medicine, Bispebjerg University Hospital, Bispebjerg Bakke 23, 2400 Copenhagen NV, Denmark
 - 3) Institute of Public Health, Section of Biostatistics, University of Copenhagen, Øster Farimagsgade 5, 1014 Copenhagen K, Denmark
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Objectives: The aim of this study was to examine whether notification of an occupational mental disorder was associated with changes in health, annual income and long-term sickness absence.

Methods: Study participants were 995 patients examined at a department of occupational medicine in Denmark. 699 patients were notified with an occupational mental disorder and 296 patients with a mental disorder but were not notified. Health-related outcomes, including General Practitioner (GP) visits, prescriptions of psychotropic drugs and long-term sickness absence, were measured at baseline during the year of medical examination, while annual income was measured a year before the examination. These outcomes were derived from the Danish National Bureau of Statistics. Follow-up was one year after examination for all outcomes. The prospective association between notification status and the four outcomes were examined by means of Poisson regression and conditional logistic regression.

Results: All measured outcomes decreased from baseline to follow-up for all participants. The changes in the outcomes were not significantly different depending on whether or not the participants were notified with an occupational mental disorder at baseline.

Conclusion: This study suggests that that being notified with an occupational mental disorder does not have a significant impact on health and annual income one year later. A significant decrease in annual income was found for both groups, highlighting the importance of providing adequate support to all employees with a mental disorder to avoid a further increase in mental health problems and the development of issues in social adaptation.

Key terms: workers' compensation system, mental disorders, mental health, work, annual income

In most Western Countries, insurance systems are in force for the compensation of disability, wage loss and medical expenses that result from work-related sickness [1]. A sizeable increase of workers' compensation claims of occupational mental disorders has been observed in Europe [2], and in Australia, work-related stress is the second most common type of claim [3]. In Denmark, claims increased by 50.5 % in 2010 (3,107 claims a year) to 2016 (4,676 claims a year). However, growing rates of workers' compensation claims may be problematic given previous research indicating that these may have harmful effects on claimants [4–9]. Indeed, studies have shown that filing a compensation claim for an occupational disease may have the unintended side effect of increasing the risk of work disability [7]. Workers' compensation claims have been linked to worse prognoses [4–6], poor recovery [8] and health-related job loss [9], while a meta-analysis found that mental health improves less among people involved in compensation claims than among non-claimants [10]. In addition, no studies have found that workers' compensation claims are associated with positive health outcomes [10].

Recently, several systematic reviews [10–12] and a meta-analysis [13] have explored the elements of the workers' compensation claim process, to explore possible explanations for the potential adverse effects on claimants' health status. The claim process was found to be perceived as stressful by the claimants [10,13] and the interaction with key stakeholders in the compensation systems, such as insurers [11] and health care providers [12], could affect claimants' recovery negatively. Further administrative hurdles in workers' compensation claims have been associated with higher mental health complaints [13]. However studies exclusively focusing on employees with workers compensation claims of occupational mental disorders are rare [3,14]. A questionnaire-based study [14] from Denmark found that 18 % of the employees with notified occupational mental disorders (total population N=433) experienced that the claim had delayed or hindered their return to work. The study identified several challenges in the claim process for the employees and, even though an important motivation behind the claim was prevention, the claims seldom lead to changes in the work environment. An Australian interview study [3] examined the perspectives of four stakeholder groups, including employers, general practitioners, sick employees and compensation agents. The authors found that compensation claims for occupational mental disorders were perceived as complex to manage and were associated with conflicting medical opinions and stigma and with a risk of developing secondary problems during the recovery process [3].

The current research on the effects of workers' compensation claims has however been criticized for a number of methodological weaknesses [13,15–17]. These includes the methodological weaknesses of observational studies when it comes to the question on reversed causality [15] e.g. employees with more severe work-related disorders may be more likely to be involved in a compensation claim than those less disabled [18,19]. Thus comparison between notified and un-notified employees is biased. A meta-review concludes that there's profound limitations in the field, a large heterogeneity between the studies in the field due to differences in compensation laws across countries and jurisdictions, and thus the findings on whether compensation are bad for health are inconclusive [15]. There is a need for more research of improved methodological quality to enhance the current knowledge about the impact of workers' compensation claims on health outcomes [10].

In the current study changes for each participant from baseline to follow-up are measures, thus the results will take into account the baseline condition for each participant. To our knowledge, no register-based study has been published to date investigating the association between workers' compensation claims and health-related outcomes for employees with notified occupational mental disorders as the main population. The question on economical compensation and whether or not this is bad for health has been studied and debated, however studies of changes in personal annual income for employees with workers compensation claims vs. sick employees without claims, have to our knowledge, not been explored. Thus this study will contribute with new knowledge in the area and is relevant for other countries who progressively have to handle these mental health claims [2]. Additionally the body of evidence in the field connecting work environmental risks with the development of mental disorders is growing [20], more claims may be filled and recognized in worker's compensation systems in the future. However it is important to stress that there's big differences between systems across countries and jurisdictions. Thus this study's findings should be interpreted with caution if applied to other countries than Denmark.

The Danish context

Denmark is one of the only European country where mental disorders are included on the List of Occupational Diseases [2]. Mental disorders not comprised on this list, are recognized under a complementary system. Currently, the most frequently recognized mental disorders are post-traumatic stress disorders (PTSD) and depression [21]. Still, very few cases of workers'

compensation claims of occupational mental disorders get recognized. In 2016 only 4.1 % were recognized [22]. This low recognition rate is primarily due to the fact that research, upon which the decisions of the Danish Labour Market Insurance are based, has so far demonstrated only a limited correlation between working conditions and mental disorders [21]. In addition, the multifactorial nature of mental disorders [23–25] can make it difficult to establish a clear causal link between the workplace exposures and a mental disease. Physicians and dentists in Denmark are obligated by law to notify if they have a suspicion that a disease may have been caused by working conditions [26]. The Workers' Compensation System exists in parallel with the healthcare system and the social security system, is a no-fault system financed by employers, and covers employees working in Denmark for disability, death, wage loss, and medical expenses [27]. If workers' compensation claims can harm the employees' health, there is an urgent need to pay attention to employees with notified occupational mental disorders due to the increasing numbers of these claims and since these employees might be particularly vulnerable and most has a very low chance of recognition and compensation. The aim of this study is therefore, to examine whether notification of an occupational mental disorder is associated with changes in health, annual income and long-term sickness absence.

METHODS

Study participants

The present follow-up study is based on a sample of 995 patients examined between 2010 and 2013 by physicians at the Department of Occupational and Environmental Medicine of Bispebjerg University Hospital in Copenhagen, Denmark. Of the patients included, 699 were notified with an occupational mental disorder, while 296 patients had a mental disorder but were not notified. Disorders were either notified during or prior to examination (no more than 2 months before on average), which means that the year of examination would typically also be the year of notification. To be included in the study, patients had to be aged 18 or more at baseline, be alive at follow-up, be registered at the Occupational Department with a mental disorderⁱ, and have full data on the requested outcome variables in the registers. Patients were referred to medical examinations by, for example, the general practitioner, other medical specialists, labor union representatives, municipalities or workplaces, because of a possible mental disorder that might have been caused by the working conditions.

Outcomes

Data were extracted by Statistics Denmark (the central authority on Danish statistics) from four registers and analyzed on the Denmark Statistic's servers, in accordance with the United Nations' Fundamental Principles of Official Statistics [28].

GP visits: Data on visits at the general practitioner per year. GP visits were treated as a count variable, ranging from 0 to a maximum of 7 visits per person (the Danish Patient Registry).

Prescriptions of psychotropic drugs: Data of prescriptions included anxiolytics, sedatives, hypnotics and antidepressants. This variable was dichotomized into “no prescriptions” and “any prescription” (the Drug Registry).

Yearly annual income: Data on total personal annual income were dichotomized into ≤ 300.000 vs. >300.000 Dkr / year (approximately 45,000 US dollars or 40.290 EUR). This cut-off point was chosen because the average of Danish employees' total personal annual income in 2009 was 368.922 Dkr / year. Average for employees on the lowest level of employment (4 levels) was 306.789 Dkrⁱⁱ. Annual income covers all types of individual earnings including social benefits, except property annual income per calendar year (the Annual income Statistics Register).

Long-term sickness absence: Data on long-term sickness absence were obtained from the KMD registry, which registers all sickness benefits in Denmark. Since an employer is entitled to reimbursement for sickness absence when an employee is on sick leave for more than 30 days, sickness absence was dichotomized into ≤ 30 days vs. >30 days. In the analyses on sickness absence, we excluded some patients (327 at baseline and 177 at follow-up) because they had an interruption of the sickness benefits during the calendar year, which was not due to return to work (examples of interruption; retirement, change from sickness benefits to unemployment benefits, starting an education or failure to comply with the rules for obtaining sickness benefits).

For GP visits, prescriptions of psychotropic drugs and long-term sickness absence, baseline was the calendar year of the medical examination, while follow-up was the year after. Baseline for annual income was the calendar year before medical examination, while follow-up was the year after the medical examination. We chose a different baseline as we were interested in detecting changes in annual income from the employees' regular annual income before getting sick.

Confounders

The following potential confounders was chosen, being known risk factors for mental health based on previous evidence: *Gender* [29–31], *age*, [32–34] *diagnosis* [35] *and occupation* [36,37] (table 1). All confounders were registered during the medical examination at the department of

occupational medicine. As part of the examination, the physician made a diagnosis according to the International Classification of Diseases (ICD-10) and noted the patient's current job title. The job titles were grouped in 6 different occupational groups according to the different kinds of work and exposure profiles: 1) Health care, hospitals, nursing homes, home care and social services: 2) Children's institutions of all kinds, schools, colleges and universities: 3) Restauration, kitchen, cleaning, trade, transport and services: 4) Administration, communication, library and museum: 5) Police, military, prison and search and rescue work: 6) Manufacturing and construction.

Statistical analysis

First, the distribution of baseline characteristics among patients non-notified and patients notified with an occupational mental disorder were calculated and compared the two groups using Chi-square test (Table 1). Second, the distribution of outcome variables among non-notified and notified patients were calculated both at baseline and at follow-up (Table 2). The prospective association between notification status (non-notified=0 vs. notified=1) and GP visits at follow-up was examined by means of Poisson regression models using Generalized Estimation Equations with robust standard errors. Possible over dispersion was accounted for by using Generalized Estimation Equations that employ residuals for estimate the variances.

The prospective associations between claim status and the three dichotomous outcomes, i.e., prescriptions, yearly annual income, and long-term sickness absence, were analyzed using conditional logistics regression.

For all the four outcomes, in consecutive models we examined the simple changes in the outcomes from baseline to follow-up (Model 0), the association between notification status and the outcomes adjusted for time (Model 1), and the association tested in Model 1 plus adjustment for the four confounders (Model 2).

In preliminary analyses, we tested the interactive effect of time, notification status and the covariates on the four outcomes; however, none of these interactions were statistically significant, and therefore were not reported in the present study. The statistical software R (version 3.2.3) was used for all the analyses.

Results

Table 1. Baseline characteristics of patients non-notified (N = 296) vs. notified (N = 699) with an occupational mental disorder.

	Non-notified		Notified		Chi-Square test
	N	%	N	%	
Gender					
Women	209	70.6	475	71.0	Chi-Square = 0.012 P = 0.901
Men	87	29.4	194	29.0	
Age group (years)					
18-35	50	16.9	99	14.8	Chi-Square = 0.742 P = 0.863
36-50	131	44.3	299	44.7	
51-60	101	34.1	239	35.7	
61+	14	4.7	32	4.8	
Diagnosis (ICD-10)*					
Depression(F32-F33)	57	19.3	143	21.4	Chi-Square = 76.690 P < 0.001
PTSD (DF431)	7	2.4	59	8.8	
Adjustment disorder (DF432-DF439)	127	42.9	368	55.0	
Work-related stress symptoms (DZ 562-DZ567, DZ730, DZ733)	95	32.1	69	10.3	
Others (other F-diagnosis + DF41)	10	3.4	30	4.5	
Occupation					
Administration, communication, library and museum	97	32.8	170	25.4	Chi-Square = 13.841 P = 0.017
Manufacturing and construction	41	13.9	67	10.0	
Police, military, prison and search and rescue work	14	4.7	52	7.8	
Restauration, kitchen, cleaning, trade, transport and services	26	8.8	68	10.2	
Health care, hospitals, nursing homes, home care and social services	63	21.3	143	21.4	
Children's institutions of all kinds, schools, colleges and universities	55	18.6	169	25.3	

* Diagnosis formulated at baseline medical examination.

Table 2. Distribution of outcome variables by notification status (Non-notified, N = 296; Notified, N = 699) at baseline and at follow up.

Outcome	Baseline		Notified		Follow-up		Notified	
	Non-notified		Non-notified		Non-notified		Non-notified	
Number of GP visits per year	N	%	N	%	N	%	N	%
0	*	*	*	*	12	4.1	39	5.8
1-2	86	29.1	207	30.9	131	44.3	304	45.4
3-4	179	60.5	403	60.2	134	45.3	303	45.3
5-7	30	10.1	55	8.2	19	6.4	23	3.4
Prescriptions								
No prescriptions	216	73	497	74.3	233	78.7	538	80.4
One or more prescriptions	80	27	172	25.7	63	21.3	131	19.6
Personal annual income per year								
≤300,000 Dkr	59	19.9	142	21.2	88	29.7	266	39.8
>300,000 Dkr	237	80.1	527	78.8	208	70.3	403	60.2
Long-term sickness absence								
≤ 30 days per year	85	28.7	122	18.2	175	59.1	366	54.7
>30 days per year	127	42.9	304	45.4	70	23.6	177	26.5
Missing/NA	84	28.4	243	36.3	51	17.2	126	18.8

* less than 5 observations

Table 3. Effects of notification status (Non-notified vs. Notified) on changes in GP visits, prescriptions, yearly annual income and long term sickness absence at follow-up.

		GP Visits		Prescriptions		Low Annual income/year		High sickness absence	
		HR ^a	95% CI	OR ^b	95% CI	OR ^b	95% CI	OR ^b	95% CI
Model 0	Change from baseline to follow up	0.83	(0.80-0.86)	0.48	(0.35-0.67)	3.89	(2.87-5.26)	0.11	(0.07- 0.17)
Model 1^c	Change from baseline to follow-up according to notification status (Notified vs. Non-notified)	0.96	(0.92-1.00)	1.09	(0.52-2.28)	1.84	(0.96-3.52)	0.49	(0.20-1.20)
Model 2^d	Change from baseline to follow-up according to notification status (Notified vs. Non-notified), adj. for age, gender, occupation and diagnosis.	0.99	(0.92-1.07)	1.01	(0.42-2.42)	1.68	(0.83-3.42)	0.52	(0.19-1.39)

^aHazard Ratios calculated by means of Poisson regression model using Generalized Estimation Equations with robust standard errors.

^bOdds Ratios calculated by means of conditional logistic regression.

Table 1 shows the baseline characteristics of the 995 participants by notification status (non-notified vs. notified). We observed significant differences between the two groups for psychiatric diagnosis ($P < 0.001$) and occupation ($P = 0.017$). Specifically, among the notified there were more participants with a post-traumatic stress disorder and an adjustment disorder, and less participants with work-related stress symptoms. With regards to occupation, we observed a lower prevalence of notified patients in Administration, IT and finance, and a higher prevalence of notified in Teaching and Pedagogy.

Table 2 shows the distribution of the four outcomes among the two groups both at baseline and at follow up.

Table 3 shows the results of the analyses testing the prospective associations between notification status and the four outcomes. Changes over time were significant for all the outcomes (Model 0). GP visits, prescriptions of psychotropic drugs, yearly annual income and long-term sickness absence, all declined significantly from baseline to follow-up. We observed no significant prospective associations between notification status and the four outcomes, neither in the model adjusted for time only (Model 1), nor in the model additionally adjusted for the confounders (Model 2).

Discussion

The present study shows that, among employees with a mental disorder, health-related indicators, including GP visits and prescription of psychotropic drugs, as well as long-term sickness absence improved from baseline to the one-year follow-up, while annual income decreased in the same time period. For all outcomes, changes were similar regardless of whether the employees were notified at baseline with an occupational mental disorder.

This is to our knowledge the first register-based study on the prospective association of being notified with an occupational mental disorder with health-related outcomes and annual income. Previously, one Danish register-based study [7] compared patients who were notified and non-notified with a work-related disease, including a subsample with notified and non-notified mental disorders and found an elevated risk of work disability two years after medical examination among those who were notified compared to those who were not notified in the total sample [7]. A Danish mixed-method study based on interviews ($N = 13$) and survey responses ($N = 433$) from employees notified with an occupational mental disorder, concluded that the workers' compensation claim

process may be problematic in relation to claimants' return to work, since 18% reported that the claim process had hindered or delayed their return to work [14]. Finally, an Australian qualitative study on mental health claims following injuries based on 93 interviews with injured persons, GPs, employers and compensation scheme agents, concluded that the claims were complex to handle, and were associated with conflicting medical opinions and stigma which could inhibit communication, reduce help seeking and be an obstacle for return to work [3].

The differences between the current studies finding and previous studies can be attributed to methodological discrepancies in study design and sample. In the Danish study [14], 47% of the cohort had recognized mental claims, whereas the current study used a potentially representative sample (recognition rate in 2010 was 4.9% [22]), but decisions about the workers' compensation claims were not included in the study. The mean processing time for rejected claims is much shorter than the time needed to process recognised claims; thus, for most employees with rejected claims, the time during which they are 'exposed' to the WCS is rather short [38,39]. By contrast the Danish study [14] had an overrepresentation of employees with recognised claims which had been assessed extensively and the compensation process could have included employer hearings and psychiatric/medical assessments, as well as the possible involvement of lawyers. Medical assessments have been identified as a potentially harmful factor in workers' compensation processes [10,12,40,41] because they e.g. exacerbate trauma by over-investigating patients. Lawyer involvement is also negatively associated with claimants' well-being, although the reasons for this finding have not been fully assessed [42]. In addition, the follow-up times differed between the studies, current study had a follow-up one year after the medical examination, where the Danish study [14] had responses from employees 2–4 years after the notification. It is possible that the negative effects of the workers' compensation process take more than one year to develop e.g. one study has shown that a processing time exceeding one year for compensation claims after accidents is associated with increased trauma [43].

A body of reviews have concluded that compensation claims and compensation are bad for health. Murgatroyd et al. [10] have carried out a systematic review, including 29 papers on the effect of financial compensation on the health outcomes of employees with musculoskeletal injuries. They have concluded that there is strong evidence for an association between compensation status and reduced psychological function; there is moderate evidence of an association between compensation

and reduced physical functioning. Harris et al 2005 have conducted a meta-analysis on the association between compensation and outcome after surgery in 211 papers; they have concluded that compensation is associated with a poor outcome after surgery [41]. Finally, Elbers et al. 2013 have conducted a meta-analysis of 10 studies on the compensation process and mental health outcomes, following different types of injuries. They concluded that being involved in compensation claims is associated with increased mental health complaints [13]. However studies in the field have been heavily criticised for their low-quality study designs and heterogeneity [13,42]. As reviews have been criticised for drawing conclusions about the detrimental impact of notifications on employees' health, based on patient groups that were not comparable at baseline [15]. Analysis in the current study took into account the participants' baseline conditions, assessing changes in outcomes after they entered the workers' compensation system. This may be one explanation for why we found no association between notification and health-related outcomes, in contrast to most studies in the field. Another difference relates to the legislative context. Most studies in the area have been carried out in North America or Australia, where access to public health insurance to replace wages lost during sick leave may be unavailable or minimal [44]. In Denmark, an employee can access some benefits, health care, and support for RTW without an approved compensation claim. No-fault systems and non-profit insurance agents have been found to be perceived more positively than fault-based systems and profit-oriented insurers [45]. In Denmark, the WCS are a no-fault system that uses a non-profit insurance agency to process workers compensation claims of occupational disorders.

The findings of this study may have implications in a European context that sees a high increase in claims due to work-related mental disorders [2], with no indications that the problem will decrease in the future [46,47]. In particular, this study suggests that employees with mental disorders should not be advised against filing a compensation claim because of concerns about the negative impact that the claim process may have on their health status. A finding of this study was that annual income decreased for all patients with a mental disorder, regardless of whether the latter was attributable to negative working conditions. Financial insecurity may reinforce mental health and social problems [36], meaning that adequate support should be provided to all employees suffering from a mental disorder.

Strength of this study is the prospective design and the use of register-based outcomes, which considerably reduce information bias. The participants served as their own controls,

thus minimizing confounding bias. Despite this, this study also presents some limitations worth considering. In particular, the outcomes used in this study were proxy measures for disease severity, while no information was available about health problems as experienced by the participants. Apart from severity, the number of GP visits at baseline may also reflect the fact that individuals may show a higher tendency to visit the GP at the beginning of a WRMD than a year after. The prevalence of prescribed psychotropic medication similar to that reported in other studies on mental disorders [48,49]. Treatments involving these drugs are commonly restricted to less than a year in the case of adjustment disorders, meaning that the decline in prescriptions can be a result of this instead of being related to notification status. Both annual income and sickness absence are influenced by employment status and employment grade. We have, however, no valid information of employment status at follow-up and about whether the unemployment rate was higher in the notified group, which could have affected the results in relation to these two outcomes.

In addition, it could be argued that in our study the notified cases had a more severe condition, and therefore a poorer prognosis, than their non-notified counterparts. Even though the distribution of diagnoses was skewed, with more severe diagnoses in the notified group (see Table 1), adjusting for this did not change the findings. Given less favourable diagnoses and prognoses, one could expect, if adopting a longer follow-up period, larger differences between notified and non-notified participants with regards to the outcomes. 95.9% of the mental health claims was rejected in 2016 and the mean of the processing time of rejected claims were 6 month in Denmark according to recent reports [39]. Our study results, suggesting no negative impact of workers compensation claims for employees with mental health claims one year after notification, is relevant for the majority of employees having workers compensation claims filled, since their claim will be closed within the first year.

In conclusion, this study shows no negative effect of filing a workers' compensation claim on GP visits, prescriptions of psychotropic drugs, long-term sickness absence and annual income at a one-year follow up. This result indicates that employees with mental disorders should not be advised against filling a workers' compensation claims because of concerns about possible negative effects of the process on their health. Currently workers' compensation claims constitute an important statistical measure which is the only form of national surveillance in Denmark of work-related diseases; they attract political attention and support strategic decisions about preventive actions

that target risks in the work environment across industries. Also claims can be used for preventive purposes to elicit workplace inspections by the Working Environmental Authority. To maintain and perhaps strengthen the surveillance of this field, while saving the time and resources of sick employees and WCS costs, one suggestion is to offer the possibility to make a registration of diseases that could be work-related, without raising an insurance claim, in the case of disorders that are currently not recognised because they are not chronic. Yet, studies using longer follow-up intervals, and including groups of notified and non-notified employees matched by diagnosis and disease severity, are needed to shed light onto the relationship between being notified with an occupational mental disorder and both health and annual income.

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ⁱ We have chosen to name work-related stress symptoms under the term 'mental disorder'.

ⁱⁱ Calculated in Denmark Statistic 20.9.2016

APPENDIX 5. QUESTIONNAIRE

Developed in Project Workers' Compensation System

Navn
Adresse
Id nr.



Velkommen til denne undersøgelse og tak fordi du tager dig tid til den.

Undersøgelsen er en del af et større forskningsprojekt, som udføres på Københavns Universitet i samarbejde med Arbejds- & Miljømedicinsk Afdeling, Bispebjerg Hospital. Projektet er finansieret af Arbejdsmiljø Forskningsfonden.

Ved at besvare spørgeskemaet bidrager du med vigtig viden om hvordan det opleves at have en arbejdsrelateret sygdom og arbejdsskadesag, om det påvirker helbred og forhold på arbejdspladsen mv. Spørgeskemaet tager ca. 12 min. at udfylde (afhænger af hvor meget du vælger at beskrive).

Du er blevet kontaktet fordi du i periode 2010-2012 har haft en anmeldt erhvervssygdom, enten en psykisk lidelse, rygsygdom eller hudsygdom. Spørgsmålene i dette spørgeskema drejer sig om **denne sygdom og anmeldelse i Arbejdsskadestyrelsen.**

Din deltagelse har stor betydning for forskningsprojektets resultater og kan gøre en forskel for fremtidige medarbejdere som bliver syge af deres arbejde. **Besvarelsen vil blive behandlet fortroligt og vil kun blive brugt til forskning** og du kan til enhver tid afbryde din deltagelse i undersøgelsen. Hvis du skulle have nogen spørgsmål er du velkommen til at tage kontakt til Yun Ladegaard.

De bedste hilsner

Yun Ladegaard

Projekt ansvarlig forsker
Institut for Psykologi
Københavns Universitet
yun.ladegaard@psy.ku.dk

Bo Netterstrøm

Dr. Med. Senior forsker
Arbejds- & Miljømedicinsk Afde-
ling
Bispebjerg Hospital

Ønsker du information om forskningsprojektets resultater når de er klar?

Angiv da din e-mail adresse: _____

Hvis du i stedet ønsker resultaterne tilsendt pr. post, skriv da din adresse:

Dit køn? (sæt ét kryds)

Mand Kvinde

Alder? (sæt ét kryds)

15-29 år 30-44 år 45-59 år 60-75 år Over 75 år

Er du dansk statsborger? (sæt ét kryds)

Ja Nej

Hvad er din højst opnåede uddannelse? (sæt ét kryds)

- Folkeskole / mellemskole
- Studentereksamen / HF
- Erhvervsfaglig uddannelse
- Kort videregående uddannelse (under 3 år)
- Mellemlang videregående uddannelse (3-4 år)
- Lang videregående uddannelse (over 4 år)
- Andet

Nuværende beskæftigelse? (sæt ét kryds)

- Privatansat
- Offentlig ansat
- Selvstændig
- Anden form for arbejde
- På efterløn, pension eller førtidspension
- Under uddannelse/omskoling
- Arbejdsløs på dagpenge
- Arbejdsløs på kontanthjælp
- Under revalidering
- Langtidssygemeldt
- Har orlov
- Andet, der ikke er arbejde

De følgende spørgsmål handler om dit helbred

Hvordan synes du i dag, at dit helbred er alt i alt?

(sæt ét kryds)

- Fremragende
- Vældig godt
- Godt
- Mindre godt
- Dårligt

Hvordan syntes du dit helbred var alt i alt inden du fik den anmeldte sygdom? (sæt ét kryds)

Hvis sygdommen har været langsomt fremadskreden, vurderes helbredet inden sygdommen startede

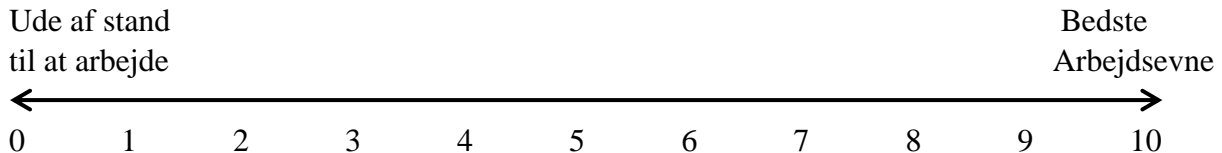
- Fremragende
- Vældig godt
- Godt
- Mindre godt
- Dårligt

De følgende spørgsmål handler om din arbejdsevne

Forestil dig, at din arbejdsevne er 10 point værd når den er bedst og 0 point svarer til at være ude af stand til at arbejde

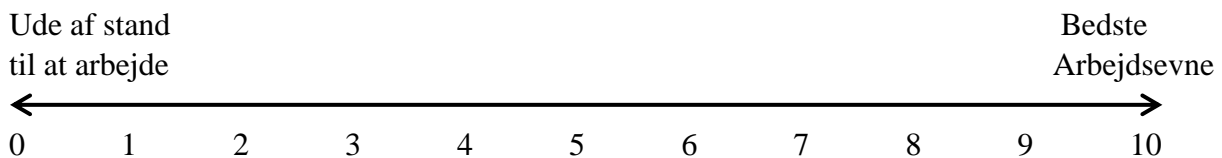
Hvor mange point vil du give din nuværende arbejdsevne?

(sæt ring om ét tal)



Hvor mange point vil du give din arbejdsevne før du fik den anmeldte sygdom?

(sæt ring om ét tal)



De følgende spørgsmål handler om den arbejdsrelaterede sygdom, som du fik anmeldt i perioden 2010-2012

Hvad arbejdede du med til dagligt på det tidspunkt du fik anmeldt sygdommen?

Angiv job: _____

Hvilken type ansættelse havde du? (sæt ét kryds)

- Fastansat/funktionær
- Tidsbegrænset ansættelse (ex. projektansættelse, vikariat)
- Timelønnet
- Selvstændig
- Elev
- Andet
- Ved ikke

Hvor mange ansatte var der på din arbejdsplads? (sæt ét kryds)

- Kun mig, jeg var selvstændig
- 1-9 ansatte
- 10-49 ansatte
- 50-249 ansatte
- over 250 ansatte
- Ved ikke

Hvor længe havde du været ansat på arbejdspladsen, da du fik den anmeldte sygdom? (sæt ét kryds)

- Under 3 måneder
- 3 måneder - mindre end 1 år
- 1 år - mindre end 3 år
- 3 år - mindre end 5 år
- 5 år - mindre end 10 år
- 10 år eller mere
- Ved ikke

Var du sygemeldt i forbindelse med den anmeldte sygdom?

(sæt ét kryds)

- Ingen sygemelding
- Kortvarigt sygemeldt (maks. 8 uger på et år)
- Deltidssygemeldt
- Langvarig sygemelding (over 8 uger)
- Ved ikke

Er du i dag ansat på samme arbejdsplads, som da du fik anmeldt sygdommen?

- Ja
- Nej
- Ved ikke

Hvis Nej - Hvorfor er du ikke længere ansat på den tidligere arbejdsplads? (sæt ét kryds)

- Jeg blev fyret
- Jeg sagde selv sagt op
- Ansættelsen udløb
- Andet Beskriv evt. _____

Hvis du blev fyret - Hvad mener du var årsagen til fyringen? (sæt ét kryds)

- Jeg var ikke længere i stand til at varetage mit job
- Sygefraværets omfang
- Selve arbejdsskadeanmeldelsen
- Ledelsen ville af med mig
- Fyringsrunde på arbejdspladsen
- Anden årsag

De følgende spørgsmål handler om arbejdspladsens håndtering i forbindelse med den anmeldte sygdom

Hvordan håndterede din arbejdsplads forløbet omkring din sygdom? (sæt ét kryds)

- Fremragende
- Vældig godt
- Godt
- Mindre godt
- Dårligt
- Arbejdspladsen kendte ikke til sygdommen
- Ved ikke

Vidste lederen på din daværende arbejdsplads at du havde anmeldt sygdommen i Arbejdsskadestyrelsen? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Blev der foretaget nogen ændringer i arbejdsmiljøet som følge af din sygdom? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Uddyb evt.

Har Arbejdstilsynet været på inspektion på din arbejdsplads som følge af din anmeldelse? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Hvis ja eller til dels - Hvordan oplevede du Arbejdstilsynets tilsyn på arbejdspladsen? (sæt ét kryds)

- Meget positivt
- Positivt
- Neutralt
- Negativt
- Meget negativt
- Ved ikke

Uddyb evt.

De følgende spørgsmål handler om din anmeldelse i Arbejdsskadestyrelsen (2010-2012)

Hvad var det vigtigste for dig at opnå med anmeldelsen? (vælg højst 3 svar)

- En anerkendelse/dokumentation på at jeg var blevet syg af forhold i mit arbejde
- Mulighed for rehabilitering
- Mulighed for omskoling
- Økonomisk erstatning
- At min anmeldelse bidrog til ændringer i Arbejdsskadesystemet
- At forebygge at det ikke sker for andre i fremtiden
- At sygdommen blev registreret for en sikkerheds skyld, i tilfælde af at det senere forværres
- Andet

Uddyb evt.

Fik du det ud af anmeldelsen som du ønskede? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Fik du det ud af anmeldelsen som du forventede? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Uddyb evt.

I hvor høj grad oplevede du afgørelsen på din anmeldelse som retfærdig?

(sæt ét kryds)

- I høj grad
- I nogen grad
- I mindre grad
- Afgørelsen var slet ikke retfærdig
- Ved ikke

Hvis anmeldelsen blev anerkendt i Arbejdsskadestyrelsen, svarede erstatningen så til det du forventede? (sæt ét kryds)

- Erstatningen var meget højere end forventet
- Erstatningen var højere end forventet
- Erstatningen svarede til det jeg forventede
- Erstatningen var lavere end forventet
- Erstatningen var meget lavere end forventet
- Jeg fik slet ingen erstatning
- Min anmeldelse blev afvist i Arbejdsskadestyrelsen
- Ved ikke

**Havde du nogen supplerende forsikringer mod arbejdsskader/tab af erhvervs-
evne, da du fik den anmeldte sygdom?** (sæt ét kryds)

- Ja
- Nej
- Ved ikke

Hvis Ja: Har du fået nogen økonomisk erstatning fra den private forsikring i forbindelse med den anmeldte sygdom? (sæt ét kryds)

- Ja
- Nej
- Ved ikke

Uddyb evt.

Oplevede du, at du var tilstrækkeligt informeret om hvad der skulle ske ift. anmeldelsen i Arbejdsskadestyrelsen? *F.eks tidshorisonter, udredning hos speciallæge, involvering af arbejdsplads mv. (sæt ét kryds)*

- Ja
- Til dels
- Nej
- Ved ikke

Uddyb evt.

Hvordan var det at udfylde spørgeskemaerne fra Arbejdsskadestyrelsen?
(sæt ét kryds)

- Let
- Neutralt
- Vanskeligt
- Meget vanskeligt
- Jeg husker det ikke
- Ved ikke

Uddyb evt.

Fik du hjælp af andre til at udfylde spørgeskemaerne fra Arbejdsskadestyrelsen? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Hvilken betydning har følgende personer på din daværende arbejdsplads haft for dig i forløbet med din sygdom og arbejdsskadeanmeldelse? (sæt ét kryds)

	Meget positiv	Positiv	Neutral	Negativ	Meget negativ	Har ikke været involveret
Øverste ledelse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nærmeste leder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tillidsrepræsentant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arbejds miljø/sikkerhedsrepræsentant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kollegaer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Uddyb evt.

Hvilken betydning har følgende personer haft for dig i forløbet med din sygdom og arbejdsskadeanmeldelse? (sæt ét kryds)

	Meget Positiv	Positivt	Neutral	Negativ	Meget negativ	Har ikke været involveret
Egen læge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speciallæge (fx.arbejdsmedicinere, ryglæge, hudlæge)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psykiater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psykolog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fagforening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pårørende (familie, venner)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Uddyb evt.

Oplever du at forløbet i forbindelse med anmeldelsen i Arbejdsskadestyrelsen har forhindret eller forsinket at du kunne vende tilbage til arbejde? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Uddyb evt.

Oplever du, at du startede for tidligt med at arbejde igen efter den anmeldte sygdom? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ikke relevant
- Ved ikke

Har den anmeldte sygdom påvirket din økonomi negativt? (sæt ét kryds)

- I høj grad
- I mindre grad
- Slet ikke
- Ved ikke

Har du fortrudt at din sygdom blev anmeldt i Arbejdsskadestyrelsen? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Var du tilbageholdende med at opsøge eller gennemføre behandling, indtil afgørelsen på din anmeldelse var kommet? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

De følgende spørgsmål omhandler din oplevelse af kommunen/jobcentret /sygedagpengekantoret

Hvordan har du generelt oplevet forløbet hos jobcentret/sygedagpengekantoret?
(sæt ét kryds)

- Meget positivt
- Positivt
- Neutralt
- Negativt
- Meget negativt
- Jeg har ikke været i kontakt med dem

Uddyb evt.

(du kan springe de næste to spørgsmål over, hvis du ikke har været i kontakt med kommunen)

Har du modtaget relevante tilbud om hjælp, rådgivning eller lign. fra jobcentret/sygedagpengekantoret? (sæt ét kryds)

- Ja
- Til dels
- Nej
- Ved ikke

Oplever du at forløbet hos jobcentret/sygedagpengekontoret har påvirket dine muligheder for at blive rask? (sæt ét kryds)

- Ja - Meget positivt
- Ja - Positivt
- Forløbet har ikke påvirket mine muligheder for at blive rask
- Ja – Negativt
- Ja – Meget negativt
- Ved ikke

**Hvilken kommune var du tilknyttet på tidspunktet for anmeldelsen i Arbejds-
skadestyrelsen? (al information behandles fortroligt)**

Angiv kommune_____

Tusind tak for din deltagelse!

Den har stor betydning for forskningsprojektets endelige kvalitet og anvendelighed.

Din besvarelse vil blive behandlet fortroligt og vil ikke blive anvendt i anden sammenhæng end forskning.

Har du nogle afsluttende kommentarer eller bemærkninger?

Må vi kontakte dig igen, såfremt der dukker nye spørgsmål op?

- Ja
 Nej tak

Angiv evt. et tlf. nr. og emailadresse, hvor vi må kontakte dig

Undersøgelsen er nu slut - Tusinde tak for din hjælp!

Spørgeskemaet foldes på midten og sendes retur i den vedlagte returkonvolut, som er adresseret og frankeret.

APPENDIX 6. ADDITIONAL ANALYSIS

**Questionnaire responses analyzed for gender, age, educational level, self-rated health and
branche.**

Questionnaire responses analyzed for gender, age, educational level, self-rated health and branche.

What was most important for you to gain from the workers compensation claim?						
Gender	Men	Women				P
Possibilities for rehabilitation	15.8	4.1				< 0.001*
Compensation from the WCS	25.8	23.1				0.550
That the notification contribute to change the workers compensation system	12.5	19.0				0.109
To prevent it from happening for other workers in the future	38.3	56.0				0.001*
To register the disease as a precaution in the event that it later worsens	44.2	51.6				0.167
Age group	<40	40-55	>55			P
Possibilities for rehabilitation	9.2	5.8	8.8			0.447
Compensation from the WCS	14.9	21.9	33.6			0.004*
That the notification contribute to change the workers compensation system	24.1	12.9	20.0			0.039*
To prevent it from happening for other workers in the future	47.1	52.7	51.2			0.679
To register the disease as a precaution in the event that it later worsens	55.2	52.2	40.8			0.062
Higher education completed	Non	Short	Academics			P
Possibilities for rehabilitation	5.1	11.3	5.7			0.112
Compensation from the WCS	25.6	18.0	26.5			0.168
That the notification contribute to change the workers compensation system	15.4	21.8	15.2			0.241
To prevent it from happening for other workers in the future	47.4	53.0	51.1			0.567
To register the disease as a precaution in the event that it later worsens	35.9	48.1	52.3			0.150
Self rated health	Good	Bad				P
Possibilities for rehabilitation	5.7	9.2				0.161
Compensation from the WCS	16.6	31.9				< 0.001*
That the notification contribute to change the workers compensation system	15.3	19.3				0.264
To prevent it from happening for other workers in the future	50.7	51.7				0.829
To register the disease as a precaution in the event that it later worsens	58.1	40.1				< 0.001*
Branche	Service	Education/health	Industri, crafts, agriculture	Police, Defence, jail	unknown	P
Possibilities for rehabilitation	4.9	7.6	7.7	17.0	0.0	0.068
Compensation from the WCS	25.4	22.2	26.9	25.5	0.0	0.575
That the notification contribute to change the workers compensation system	17.3	16.4	19.2	17.0	28.6	0.939
To prevent it from happening for other workers in the future	49.2	57.9	50.0	36.2	42.9	0.098
To register the disease as a precaution in the event that it later worsens	49.2	57.9	42.3	25.5	42.9	0.003

How did your workplace handle the process when you got sick?				
	Good	Bad	Other answers	P
Gender				
Men	30.0	64.2	5.8	0.407
Women	25.3	70.6	4.1	
Age group				
<40	31.0	64.4	4.6	0.854
40-55	25.9	69.2	4.9	
>55	24.8	71.2	4.0	
Higher education completed				
Non	25.6	69.2	5.1	0.497
Short	21.1	73.7	5.3	
Academics	29.5	66.3	4.2	
Self rated health				
Good	31.0	64.6	4.4	0.091
Bad	21.7	73.4	4.8	
Branche				
Service	24.9	69.7	5.4	0.272
Education/health	27.5	69.6	2.9	
Industri, crafts, agriculture	19.2	73.1	7.7	
Police, Defence, jail	38.3	55.3	6.4	
Unknown	0.0	100.0	0.0	

How significant were the following people at your former workplace to you during your illness and workers' compensation claim?

Top Management

	Positive	Neutral	Negative	Not involved/other	P
Gender					
Men	12.5	20.8	44.2	22.5	0.541
Women	12.0	15.2	47.5	25.3	
Age group					
<40	8.0	18.4	44.8	28.7	0.776
40-55	12.5	17.4	46.4	23.7	
>55	14.4	14.4	48.0	23.2	
Higher education completed					
Non	20.5	15.4	41.0	23.1	0.257
Short	7.5	20.3	44.4	27.8	
Academics	13.3	15.2	48.5	23.1	
Self rated health					
Good	12.2	18.8	45.0	24.0	0.681
Bad	12.1	14.5	48.3	25.1	
Branche					
Service	13.5	14.1	49.7	22.7	0.424
Education/health	12.9	15.8	45.0	26.3	
Industri, crafts, agriculture	3.8	19.2	46.2	30.8	
Police, Defence, jail	10.6	29.8	36.2	23.4	
Unknown	0.0	14.3	71.4	14.3	

Line manager

	Positive	Neutral	Negative	Not involved/other	P
Gender					
Men	19.2	15.8	48.3	16.7	0.665
Women	18.7	14.9	53.8	12.7	
Age group					
<40	21.8	23.0	48.3	6.9	0.066
40-55	20.1	14.3	50.9	14.7	
>55	14.4	11.2	57.6	16.8	
Higher education completed					
Non	15.4	15.4	46.2	23.1	0.579
Short	17.3	13.5	54.1	15.0	
Academics	20.1	15.9	52.3	11.7	
Self rated health					
Good	21.8	15.7	51.1	11.4	0.202
Bad	15.5	14.5	53.6	16.4	
Branche					
Service	18.9	14.1	56.8	10.3	0.177
Education/health	19.9	15.2	48.5	16.4	
Industri, crafts, agriculture	11.5	3.8	69.2	15.4	
Police, Defence, jail	21.3	25.5	36.2	17.0	
Unknown	0.0	14.3	71.4	14.3	

Union Representative

	Positive	Neutral	Negative	Not involved/other	P
Gender					
Men	25.0	20.8	12.5	41.7	0.706
Women	23.4	19.3	17.1	40.2	
Age group					
<40	21.8	25.3	13.8	39.1	0.186
40-55	23.7	19.2	19.6	37.5	
>55	25.6	16.8	10.4	47.2	
Higher education completed					
Non	20.5	20.5	12.8	46.2	0.895
Short	24.1	17.3	18.8	39.8	
Academics	24.2	20.8	14.8	40.2	
Self rated health					
Good	24.9	18.8	16.6	39.7	0.872
Bad	22.7	20.8	15.0	41.5	
Branche					
Service	20.0	19.5	17.8	42.7	0.286
Education/health	26.9	20.5	14.0	38.6	
Industri, crafts, agriculture	15.4	15.4	11.5	57.7	
Police, Defence, jail	36.2	21.3	14.9	27.7	

Unknown	0.0	14.3	28.6	57.1	
Health and safety representative					
	Positive	Neutral	Negative	Not involved/other	P
Gender					
Men	14.2	20.8	15.8	49.2	0.827
Women	11.7	19.0	18.0	51.3	
Age group					
<40	12.6	21.8	17.2	48.3	0.982
40-55	12.1	19.6	18.3	50.0	
>55	12.8	17.6	16.0	53.6	
Higher education completed					
Non	7.7	28.2	15.4	48.7	0.643
Short	15.0	17.3	19.5	48.1	
Academics	11.7	19.3	16.7	52.3	
Self rated health					
Good	12.7	16.6	18.8	52.0	0.429
Bad	12.1	22.7	15.9	49.3	
Branche					
Service	9.7	18.4	20.0	51.9	0.514
Education/health	15.2	20.5	15.2	49.1	
Industri, crafts, agriculture	3.8	15.4	23.1	57.7	
Police, Defence, jail	17.0	25.5	10.6	46.8	
Unknown	14.3	0.0	28.6	57.1	
Colleagues					
	Positive	Neutral	Negative	Not involved/other	P
Gender					
Men	43.3	19.2	13.3	24.2	0.038*
Women	44.9	23.1	18.7	13.3	
Age group					
<40	46.0	25.3	16.1	12.6	0.894
40-55	43.3	21.0	18.8	17.0	
>55	45.6	21.6	15.2	17.6	
Higher education completed					
Non	43.6	23.1	15.4	17.9	0.994
Short	45.1	22.6	18.0	14.3	
Academics	44.3	21.6	17.0	17.0	
Self rated health					
Good	49.8	21.4	14.0	14.8	0.084
Bad	38.6	22.7	20.8	17.9	
Branche					
Service	40.5	23.8	19.5	16.2	0.690
Education/health	46.2	21.6	16.4	15.8	
Industri, crafts, agriculture	42.3	19.2	23.1	15.4	
Police, Defence, jail	57.4	17.0	6.4	19.1	
Unknown	28.6	28.6	28.6	14.3	

Were any changes made in your working environment in relation to your illness?					
	Yes	Partly	No	Don't know/other	P
Gender					
Men	15.8	13.3	55.8	15.0	0.315
Women	11.1	19.6	54.7	14.6	
Age group					
<40	14.9	21.8	49.4	13.8	0.615
40-55	12.1	18.8	55.8	13.4	
>55	11.2	13.6	57.6	17.6	
Higher education completed					
Non	15.4	12.8	51.3	20.5	0.680
Short	11.3	15.0	59.4	14.3	
Academics	12.5	20.1	53.4	14.0	
Self rated health					
Good	10.9	19.2	59.0	10.9	0.063
Bad	14.0	16.4	50.7	18.8	
Branche					
Service	10.8	18.9	57.8	12.4	0.553
Education/health	11.7	18.1	54.4	15.8	

Industri, crafts, agriculture	7.7	11.5	53.8	26.9	
Police, Defence, jail	23.4	17.0	46.8	12.8	
Unknown	14.3	14.3	57.1	14.3	

Has the Danish Working Environment Authority carried out an inspection at your workplace as a result of your claim?

	Yes/somewhat	No	Don't know/not relevant	P
Gender				
Men	7.5	56.7	35.8	0.508
Women	8.5	61.4	30.1	
Age group				
<40	12.6	56.3	31.0	0.586
40-55	7.1	60.7	32.1	
>55	7.2	61.6	31.2	
Higher education completed				
Non	5.1	64.1	30.8	0.617
Short	6.0	63.2	30.8	
Academics	9.8	58.0	32.2	
Self rated health				
Good	7.9	59.0	33.2	0.757
Bad	8.7	61.4	30.0	
Branche				
Service	5.4	62.2	32.4	0.033*
Education/health	13.5	56.1	30.4	
Industri, crafts, agriculture	0.0	50.0	50.0	
Police, Defence, jail	6.4	68.1	25.5	
Unknown	0.0	85.7	14.3	

Did you feel adequately informed about the workers compensation process?

	Yes	Somewhat	No	Don't know	P
Gender					
Men	22.5	35.8	36.7	5.0	0.393
Women	22.2	28.2	42.7	7.0	
Age group					
<40	23.0	26.4	43.7	6.9	0.313
40-55	19.6	30.8	44.6	4.9	
>55	26.4	32.0	32.8	8.8	
Higher education completed					
Non	23.1	33.3	38.5	5.1	0.965
Short	19.5	31.6	41.4	7.5	
Academics	23.5	29.2	41.3	6.1	
Self rated health					
Good	24.5	29.7	38.0	7.9	0.288
Bad	19.8	30.9	44.4	4.8	
Branche					
Service	23.2	31.9	39.5	5.4	0.937
Education/health	21.1	28.7	41.5	8.8	
Industri, crafts, agriculture	19.2	26.9	46.2	7.7	
Police, Defence, jail	25.5	31.9	40.4	2.1	
Unknown	14.3	28.6	57.1	0.0	

How was it to fill out the compensation schemes?					
	Easy	Neutral	Hard	Don't remember/other	P
Køn					
Men	8.3	31.7	38.3	21.7	0.024*
Women	7.9	18.4	48.4	25.3	
Age group					
<40	8.0	19.5	44.8	27.6	0.816
40-55	7.6	21.0	48.7	22.8	
>55	8.8	25.6	40.8	24.8	
Higher education completed					
Non	5.1	20.5	48.7	25.6	0.905
Short	7.5	21.1	49.6	21.8	
Academics	8.7	22.7	43.2	25.4	
Selvvruderet health					
Good	7.9	24.5	39.3	28.4	0.031*
Bad	8.2	19.3	52.7	19.8	
Branche					
Service	8.6	20.5	45.4	25.4	0.692
Education/health	7.6	22.2	46.8	23.4	
Industri. crafts. agriculture	11.5	15.4	38.5	34.6	
Police. defence. jail	6.4	25.5	48.9	19.1	
Unknown	0.0	57.1	28.6	14.3	

Did the process in relation to your workers compensation claim hinder or delay your return to the labour market?				
	Yes/somewhat	No	Don't know/not relevant	p
Køn				
Men	26.7	68.3	5.0	<0.001*
Women	14.2	69.9	15.8	
Age group				
<40	17.2	69.0	13.8	0.717
40-55	18.3	71.0	10.7	
>55	16.8	67.2	16.0	
Higher education completed				
Non	15.4	64.1	20.5	0.356
Short	21.8	66.9	11.3	
Academics	15.9	71.6	12.5	
Selvvruderet health				
Good	9.6	80.3	10.0	<0.001*
Bad	26.6	57.5	15.9	
Branche				
Service	16.2	72.4	11.4	0.415
Education/health	18.1	66.7	15.2	
Industri. crafts. agriculture	15.4	65.4	19.2	
Police. defence. jail	25.5	66.0	8.5	
Unknown	0.0	100.0	0.0	