Chapter 1

General introduction
WORK DISABILITY AND MENTAL HEALTH PROBLEMS

Work is an essential feature of adult life, and has personal, economic and social value. Work substantially contributes to a person’s identity; it provides income and makes a person feel that he or she is playing a useful role in society. Prolonged work disability may not only lead to poorer quality of life and loss of social identity, it may also result in permanent exclusion from work. Mental health problems are currently one of the first three leading causes of work disability(1). The World Health Organization predicts that by 2020 mental health problems, in particular depression will rate as the leading cause of work disability(2). In developed countries one-year prevalence rates of mental health problems range from 10 to 18% in the working population(3;4). Besides personal suffering, work disability due to mental health problems bring about high costs of sickness absence. Nineteen percent of all sickness absence was caused by mental health problems in the Netherlands(5). This high percentage is caused by the relative long duration of sick leave due to mental health problems compared to other health problems. The relative long duration of absence due to mental health problems was also found in the UK, where sickness absences due to mental health problems account for 25% of short absences and 47% of longer absences(3). Due to the duration of absence, costs of work disability due to mental health problems are enormous. In 2005, more than one third of all disability benefits was paid related to mental health problems in the Netherlands(6). In Canada, costs of disability claims was estimated at 14.4 billion dollars annually(7). In the UK, stress-related sickness absences from work account for 91 million lost working days each year(8). The costs for UK employers are estimated at 26 Billion Pounds each year(9). It is important to reduce work disability due to mental health problems because of the personal consequences and the high costs.

CURRENT THEORETICAL APPROACHES OF WORK DISABILITY

The biopsychosocial model is currently the dominant model explaining disorders. It conceptualizes disability as a consequence of the interaction between somatic, behavioral/psychological, and social phenomena(10;11). Sick-listed employees who are depressed, may have developed a depression because of a somatic condition (such as chronic low back pain), a social condition (such as high job demands), or a psychological condition (such as an overly self-critical nature). Based on the biopsychosocial model, the World Health Organization introduced the International Classification of Functioning, Disability and Health (ICF) presented in Figure 1(12). The ICF considers functioning of an individual with a disorder in relation to the context (personal and external factors). In the ICF, discrepancies between impairment problems and participation problems, such as the fact that some employees stay sick-listed while symptoms have disappeared and some employees return to work while having serious disorders, can be explained by personal and external factors(13). Return to work (RTW) can be considered at participation level(14). Personal factors encompass psychosocial and physical factors like age,
personality, physical condition, motivation, cognitions, expectations, and self-efficacy. External factors encompass the physical and social environment. Within the arena of work disability prevention, Loisel et al. specified the external environment of the ICF model. The workplace, the personal environment of an employee, the health care system, and the compensation system are all part of the arena of work disability and are relevant for a RTW of an employee (Figure 2)(15).

![Figure 1](image)

**Figure 1.** The International Classification of Functioning, Disability and Health(12) applied to RTW.

**ORGANISATION OF HEALTH CARE AND SOCIAL SECURITY IN THE NETHERLANDS**

Dutch occupational health care has been subject of change over the last decade. In 2002, the Gatekeeper Improvement Act was introduced, aimed to stimulate RTW in the first year of sick leave by strengthening the responsibility for RTW of both employee and employer. Employers are obliged to continue paying wages for the first two years of sick leave (since 2004) and the level and duration of benefits have become less favourable for employees. Furthermore, employees and employers have to formulate an action plan for RTW and keep in contact with each other and the occupational health service to monitor reintegration. The role of the occupational physician is to advice employers and employees about sick leave and RTW. Because of the rise in disability due to mental health problems, the government formed a committee (Donner Committee) to consider prevention, treatment and RTW regarding sick leave due to mental health problems(16). This committee recommended that only full and permanently disabled individuals should be eligible for disability benefits. This recommendation resulted in the introduction of the Work and Income Act (WIA) in 2006. Since the WIA, disability benefits for disabled employees are restricted to a maximum of 75% percent of the last earned salary.
Furthermore, the WIA encourages working in addition to benefits, to accomplish individuals’ prior level of income. Thus, the current prospect of receiving disability benefits is less favourable.

**Figure 2.** The arena in work disability prevention as conceived by Loisel et al.(15).

Treatment of sick-listed employees with mental health problems by occupational physicians is executed according to the guideline ‘management of employees with common mental health problems’, published by the Netherlands Society of Occupational Medicine (NVAB) in 2000 and updated in 2007(17;18). This guideline aims to provide an optimal functioning of the employee with mental health problems to prevent long-term sick leave and frequent recurrences. Fundamental to this guideline was the study of Van der Klink(19), which investigated the effect of cognitive behavioral therapy elements conducted by the occupational physician and advice on work interventions to facilitate RTW. The view that RTW is usually a precondition for health improvement is supported, while health improvements are not always preconditions for RTW. The guideline is based on an activating approach, time-contingent process evaluation, and cognitive behavioural principles. Activation rather than rest is promoted for sick-listed employees with mental health problems.

**WORKPLACE INTERVENTIONS**

Work disability is no longer seen simply as the consequence of a health problem, but rather as the result of interactions between the employee and three main systems: the
health care system, the work environment system and the financial compensation system(15;20;21). During the RTW process, the work environment and the roles of the stakeholders have to be considered(15;22). Intervention studies for employees with mental health problems usually focus exclusively on the improvement of symptoms instead of a focus on RTW. However, it is known that improvements on symptom level do not automatically result in improvements in functioning or participation(23). Therefore, interventions directed to RTW are needed, preferably in collaboration with the workplace. Workplace interventions are well known in the low back pain literature(24-26). These interventions are directed to change the workplace or equipment, the work design and organization (including working relationships), the working conditions and/or the work environment. Furthermore, workplace interventions comprise occupational (case) management with active stakeholder involvement of at least the employee and the employer(27).

Anema and Steenstra investigated the effect of a participatory workplace intervention compared to usual care for sick-listed employees with low back pain in the Dutch setting, based on a successful Canadian study(28). The participatory workplace intervention consists of a stepwise communication process with the sick-listed employee and the supervisor to identify and solve obstacles for RTW and to formulate a consensus-based plan for RTW. The duration of sick leave until lasting RTW was reduced with 27 days by this intervention, and investments were estimated at 19 Euros per one day reduction of sick leave(29;30). Most obstacles and solutions retrieved by sick-listed employees with low back pain and their supervisors were related to the organization of work and the workstation design(31). However, mental workload and stress were discussed as well(32). The existence of the successful participatory workplace intervention for sick-listed employees with low back pain raises the question whether this intervention would be appropriate, achievable, effective and cost-effective for sick-listed employees with mental health problems.

**TERMINOLOGY OF MENTAL HEALTH PROBLEMS IN THIS THESIS**

Mental health problems range from stress symptoms to severe psychiatric disorders such as psychosis, so there is a continuum of (combinations of) mental health problems which are at some point of severity labelled as disorders(33;34). The terminology regarding mental health problems is confusing due to the variety of terms and diagnostic criteria used. Some differences in terminology are instigated and maintained by the existence of two different diagnostic classifications: the International Classification of Diseases (ICD-10) published by the World Health Organization and the classification system of the American Psychiatric Association, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Furthermore, use of terminology differs among countries, depending on the level of stigma associated with mental health problems. Even within countries there is no consensus on terminology among treatment providers(35;36), particularly when stress-related(35).
Stress-related disorders are more prevalent than psychiatric disorders in the Netherlands. Approximately 80% of the individuals with mental health problems suffer from stress-related disorders(37). Stress-related disorders are characterized by an identifiable stressor or stressful situation and a reaction to this situation in terms of distress symptoms, with or without disfunctioning in one or more social roles. Loss of control is the main characteristic of stress-related sick leave. Stress-related disorders are not classified in the DSM-IV. Sick leave can be viewed as a temporary impairment of the occupational role, which is the most evident social role that cannot be fulfilled (completely) anymore. Most occupational physicians and general practitioners classify stress-related disorders as stress, neurasthenia, adjustment disorder, nervous breakdown, or burnout(38). The concept common mental disorder is also found in the literature(39). There is a gradual transition from stress-related disorders that are completely determined by the interaction between the individual and a demanding environment up to more severe mental disorders, such as depression and anxiety disorder. Common mental disorder, stress-related mental disorder, and adjustment disorder are frequently used in the literature. These three terms comprise stress-related disorder, depression, and anxiety disorder.

The study population of this thesis concerns common mental disorders, selected by self-reported elevated distress levels and sick leave. Box 1 presents symptoms of elevated distress, based on the Four Dimensional Symptom Questionnaire(40;41). As a consequence of preferences of scientific journals, consistency regarding the terminology in this thesis was not achievable. We adapted the terminology to the preferences of journals. Therefore next to distress, the terms stress-related mental disorder and common mental disorder were used interchangeable in this thesis.

<table>
<thead>
<tr>
<th>Individuals report whether they suffered from or felt the following during the past week:</th>
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<tbody>
<tr>
<td>Feeling down or depressed.</td>
</tr>
<tr>
<td>Worry.</td>
</tr>
<tr>
<td>Disturbed sleep.</td>
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<tr>
<td>Listlessness.</td>
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<tr>
<td>Tense.</td>
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<tr>
<td>Easily irritated.</td>
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<tr>
<td>Not able to do anything anymore.</td>
</tr>
<tr>
<td>No longer able to take any interest in the people and things around you.</td>
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**Box 1.** Sixteen distress symptoms, based on the Four Dimensional Symptom Questionnaire. The level of distress is considered as elevated when ten or more symptoms occur sometimes, or when five or more symptoms occur regularly, often or constantly.
OBJECTIVES OF THE THESIS

This thesis concerns workplace interventions and the facilitation of RTW for sick-listed employees, with the main focus on sick-listed employees with stress-related disorders.

The main objective of this thesis is:

To assess the feasibility, effectiveness and cost-effectiveness of the participatory workplace intervention for sick-listed employees with distress.

The first three chapters of this thesis concern three sub-objectives:
1. To summarize the literature on the effectiveness of workplace interventions in preventing long-term work disability among sick-listed employees with mental health problems, musculoskeletal disorders, and other health conditions, when compared to usual care or clinical interventions.
2. To investigate the validity and an optimal cut-off point of a distress screener for the early identification of distress in employees on sick leave.
3. To develop the participatory workplace intervention for sick-listed employees with distress.

OUTLINE OF THE THESIS

In chapter 2, the first sub-objective of this thesis is addressed by a systematic review of the literature. Chapter 3 is a validation study of the 3-item distress screener, based on the Four Dimensional Symptom Questionnaire. An optimal cut-off point of the distress screener is determined and the screener is validated by relating it to the Four Dimensional Symptom Questionnaire and to medical diagnoses of the occupational physician.

The development of the participatory workplace intervention for employees with distress is described in chapter 4, based on the effective workplace intervention for employees with low back pain. The Intervention Mapping approach is applied to develop a theory and evidence-based intervention. Employees, supervisors and occupational health professionals participated in focus groups, in order to tailor the participatory workplace intervention to the specific target group.

The chapters 5, 6, 7, and 8 address the main objective. In order to investigate the (cost-) effectiveness of the participatory workplace intervention, a randomized controlled trial is designed and presented in chapter 5. The feasibility of the participatory workplace intervention is evaluated in chapter 6. The reach and implementation of the workplace intervention, the satisfaction and expectations of all stakeholders, and the intention to use the workplace intervention in the future are described. In chapter 7, the effects of the workplace intervention on lasting RTW and stress-related symptoms are investigated. Chapter 8 describes the cost-effectiveness of the workplace intervention for sick-listed employees with distress at 12 months follow-up.
Finally, chapter 9 presents the general discussion. In this chapter, the main research findings, methodological considerations, differences between RTW for employees with low back pain en mental health problems, personal and external factors for RTW, and recommendations for future research and practice are discussed.
References


(6) Statline [electronic database for statistical information about societal and economic topics presented in tables and figures] [computer program]. 2007.


(9) Sainsbury Centre for Mental Health & College of Occupational Therapists. Vocational Rehabilitation: what is it, who can deliver it, and who pays? London: Sainsbury Centre for Mental Health & College of Occupational Therapists; 2008.


