Employees with common mental disorders: from diagnosis to return to work
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Citation for published version (APA):
Nieuwenhuijsen, K. (2004). Employees with common mental disorders: from diagnosis to return to work

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Chapter 1

General introduction
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Background and motives

Mental health problems are associated with limitations in many domains of life. Apart from individual suffering, two of the negative consequences of these mental health problems are loss of work productivity and sickness absence. A recent study estimated the annual costs of lost productive work time among US workers with depression to be $44 billion.

Moreover, in Great Britain, sickness absence due to all mental health problems is estimated at 40 million days per year. These calculations do not only reflect short absence spells. Mental disorders represent a large proportion of persons receiving disability benefits in several industrialized countries such as the Netherlands, the US, Norway, and Japan. In the United Kingdom, common mental disorders were found to be the second major cause of sickness absence spells longer than 21 days.

Mental health problems is a broad term that applies to conditions ranging from experiencing stress symptoms to severe psychiatric disorders such as psychosis. In working populations, the following common mental disorders constitute the majority of mental health problems: adjustment disorder, depression, and anxiety disorder. Adjustment disorder is an accepted diagnosis in DSM-IV and ICD-10 and refers to a maladaptive reaction to an identifiable stressor occurring within a short time after onset of the stressor. In occupational settings, this diagnosis can be applied to many overlapping stress-related concepts and diagnoses such as neurasthenia, nervous breakdown, burnout, and surmenage. These concepts and diagnoses have been described in detail by van der Klink and have distress symptoms and dysfunctioning in one or more social roles in common. Depression and anxiety disorders are terms to describe both the minor, and usually mixed, syndromes often seen in primary care, as well as major conditions classified by the DSM-IV. Common mental disorders do not only share a high incidence, they also show communality of symptoms. While adjustment disorders are often accompanied by depressive and anxiety symptoms, anxiety and depressive disorders in terms of the DSM-IV classification are considered more severe. This notion is reflected by the DSM-IV criteria which state that an adjustment disorder diagnosis is not allowed if the severity and duration threshold for anxiety or depressive disorder is reached. This thesis mainly concerns common mental disorders. Only four employees in our cohort were diagnosed with more severe mental health problems.

In the Netherlands, employees who are absent from work due to sickness are required to visit their occupational physician for rehabilitation purposes. Approximately 30% of those employees are absent from work due to mental health problems. The majority of these
employees with mental health problems are suffering from an adjustment disorder, while a smaller yet substantial proportion suffers from a depression or an anxiety disorder. The occupational physician plays an important role in the rehabilitation process of employees on sick leave. The overall process of rehabilitation can be defined as the course of individuals towards their optimal level of physical, mental, and social functioning. Occupational rehabilitation more specifically concerns the actions which are undertaken, mostly by occupational physicians, to enhance return to work. Ideally, this management of the return-to-work process will consist of a diagnostic process and several interventions including the drawing up of a return to work plan. It has been argued that quality of rehabilitation activities of occupational physicians needs to be studied more, because these have hardly been subject of study compared to other activities such as pre-employment examinations. Consequently, the process of occupational rehabilitation remains more or less a “black box”, despite the extensive time spent on consultations by occupational physicians.

Quality of occupational rehabilitation can be assessed by using either process- or outcome measures. Process quality can be determined by measuring adherence to practice guidelines by occupational physicians. In 2000, the Dutch Association for Occupational and Industrial Medicine (NVAB) published practice guidelines for the rehabilitation of employees with mental health problems. These practice guidelines support occupational physicians with instructions on desired rehabilitation activities. However, these guidelines are mostly based upon research which did not focus specifically on return to work. The one study that did focus on employees on sick leave found that an intervention similar to the practice guidelines was effective in shortening the time until return to work. For improvement of quality of care, process measures have advantages over outcome measures, because process measures yield specific feedback on which aspects of care need to be improved. Nevertheless, process measures are valid only if process and outcome are closely related.

Therefore, the main aim of this thesis is to contribute to quality improvement of occupational rehabilitation of patients with mental health problems. To this end, we will measure quality of the process of occupational rehabilitation and relate this quality to return to work. The second way to attain the goal of this thesis is to provide occupational physicians with scientific knowledge, which can be used during occupational rehabilitation. In addition to interventions and treatment, diagnosis, clinical manifestations, and prognosis of the disorder are three of the central issues in clinical medicine. This thesis
therefore focuses on generating scientific knowledge and evaluating practical tools related to these three areas.

**Conceptual model**

Occupational rehabilitation typically has a multidimensional focus on health since it addresses not only physical and mental disorders, but also social functioning. The World Health Organization (WHO) has proposed a multidimensional model for the consequences of disease. Figure 1 shows this International Classification of Functioning, Disability and Health (ICF) model.\(^{23}\) The model distinguishes two domains of health. First the health condition, which comprises both physical and mental body functions and structures, and second its possible consequences expressed in limitations of activities and participation. This model can also be helpful in understanding the dimensions of sickness absence due to mental health problems.

With respect to sickness absence of employees with mental health problems, the point of departure is an employee who is on sick leave due to his or her health condition. This condition (for instance a depression) has lead to an impairment of mental functions, e.g. impaired energy function leading to fatigue. This impairment interacted with environmental factors, such as work characteristics, and personal factors, such as coping style, in determining the extent of the limitations in activities and participation (sickness absence). This ICF approach corresponds to the notion that sickness absence is not solely determined by a health condition, but is a composite outcome comprising health, social, working, and personal conditions.\(^{24,25}\)
Return to work is the central theme of the present study. In accordance with the multifactorial view on sickness absence, we postulate that regaining health does not necessarily result in return to work. We assume that a reduction of mental impairments and activity limitations will contribute to a return to work of the absent employee. However, environmental factors and personal factors will also influence this process. In employees who are absent due to mental health problems, this notion is substantiated by the finding that symptom reduction is not always immediately followed by return to work and earlier work resumption is not always accompanied by less symptoms. Figure 2 shows the ICF model applied to return to work of employees with mental health problems. This model has been used as a conceptual model for this thesis.
Reduction of impairment in mental functions  
*e.g. reduction of fatigue or depressive symptoms*

Reduction of activity limitations  
*e.g. recovery of work functioning*

Return to work

Environmental factors  
*e.g. occupational rehabilitation by OP or work characteristics*

Personal factors  
*e.g. age or recovery expectations*

Figure 2 Conceptual model of factors involved in return to work of employees with mental health problems. OP = Occupational Physician

When related to return to work, concepts of the ICF model can be specified as following. Impairments in mental functions may be made operational as experiencing fatigue, anxiety, or depressive symptoms. Irrational cognitions, which are assumed to be one of the causes of psychological symptoms, can also be categorised as belonging to the concept of impairment in mental functioning. Impairments in work functioning were regarded to be activity limitations, while return to work may be viewed as the end of participation limitations. Occupational rehabilitation by an occupational physician, work characteristics, and supervisory behaviour during the return to work process constitute environmental factors. Personal factors include demographic variables such as age, coping style, and recovery expectations of the employee.

Outline of this thesis

Following the aims of this thesis, the next three chapters deal with the diagnosis, clinical manifestations, and prognosis of common mental disorders among employees. The detection of anxiety disorder and depression in employees with mental health problems is the subject of the study described in Chapter 2. As stated previously, anxiety disorder and depression are considered more severe disorders than adjustment disorders. However, the communality in symptoms of these three disorders complicates the recognition of these disorders in primary and occupational health care settings. This chapter describes the evaluation of psychometric properties and case-finding abilities of the Depression Anxiety Stress Scales in order to assess its value for use in occupational health care.
Subsequent to the determination of the clinical diagnosis, Chapter 3 explores differences in one of the clinical manifestations, namely irrationality, of common mental disorders between the diagnostic groups. Cognitive behavioural therapy (CBT) has been advocated as the therapy of choice for common mental disorders. One aim of CBT is to change irrational thoughts or cognitions of patients with mental health problems. Knowledge of the specific characteristics of irrationality could provide occupational physicians with directions as to which patients could potentially benefit most from cognitive interventions.

Apart from diagnostic information, a clinical assessment of an employee with a common mental disorder usually comprises other information such as demographic, symptom-related, and work characteristics. Chapter 4 aims at using information that is potentially available to the occupational physician for a more accurate estimation of the prognosis of return to work. This study attempts to develop a clinical prediction rule that can be used as an easy to apply prognostic tool by occupational physicians.

During the intervention phase of occupational rehabilitation, an occupational physician initiates activities to stimulate return to work. In addition to the occupational physician, supervisors also play a key role in the return to work process. Supervisors communicate with employees on return to work and they usually have the authority to implement adjustments in working conditions. Therefore, Chapter 5 addresses supervisory behaviour as a predictive factor for return to work.

The following two chapters of this thesis focus on the quality of occupational rehabilitation. In Chapter 6, the method of indicators of performance is applied to assess process quality in an audit of medical files of employees with adjustment disorders. The study described in Chapter 7 further validated content validity of a set of performance indicators by means of an expert round. This Chapter also reports on the use of these performance indicators in a prospective cohort study of employees with mental health problems. Both studies on quality addressed the question whether high process quality was related to better outcome. Outcome of occupational rehabilitation was defined as either time to return to work (Chapter 6 and 7) or patient satisfaction and symptom reduction (Chapter 7). Finally, Chapter 8 presents the general discussion. In this chapter, the main research findings, the methodological features, and the recommendations for practice and future research of this thesis will be discussed. This chapter will finish with the final conclusion of this thesis.