Promoting work participation of non-permanent workers with psychological problems: An evidence-based approach to occupational health care
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CHAPTER 1

General introduction
Work participation in non-permanent workers with psychological problems

In recent decades, sick leave due to psychological problems, such as depression, anxiety and stress-related disorders, has increased considerably worldwide. Psychological problems are the major cause of absenteeism (40%) and prolonged work disability, including disability pensions, in many high-income countries today [1,2]. Apart from the individual suffering caused by psychological problems [3,4], associated sick leave creates a considerable economic burden to society and has emerged as a major public and occupational health problem in many countries [1,2,5].

Workers without a permanent employment contract, also known as non-permanent workers, such as the unemployed and temporary agency workers and workers with an expired fixed-term contract, represent a vulnerable group within the working population. They are at even greater risk for sickness absence and prolonged work disability due to psychological problems than the general working population [6-9]. In the Netherlands, non-permanent workers have a three times greater risk of becoming long-term work disabled (>18 months) compared to workers with a permanent employment contract (employed workers) [10].

This vulnerable group of non-permanent workers is characterized by a poor mental health status, low socio-economic position, less job security, lower education and has more often a non-native background compared to employed workers [7,8,11]. Compared to sick-listed employed workers, sick-listed non-permanent workers perceive their health status more negatively and encounter more psychosocial barriers (such as personal problems, debts, addiction, legal proceedings, care issues) during the return to work (RTW) process [7,8,11-13]. Moreover, these workers experience a greater distance to the labor market compared to sick-listed employed workers because there is no workplace to return to when sick-listed [11].

Despite the higher risk of prolonged work disability, little is known about effective interventions to promote work participation in non-permanent workers. An overview of which interventions or elements of an intervention are effective for non-
permanent workers is still lacking. Consequently, research on effective interventions, including a literature review, and an analysis of factors influencing work participation of non-permanent workers are needed. The need for effective interventions to promote work participation of non-permanent workers with psychological problems is becoming increasingly evident in European countries. This is largely the result of the economic recession [14] and changing labor market conditions, which in recent years has led to relatively more workers becoming non-permanent workers [7,15,16]. Given the growing rate of non-permanent workers, the increasing rate of sick leave due to psychological problems and the higher risk for prolonged work disability in this group, the burden these non-permanent workers impose on public or occupational health programs/systems has become even greater [7,15,16]. In addition, the suffering of these non-permanent workers with psychological problems due to loss of employment is more severe than is the case with people without mental health problems [14].

Studies on employed workers versus non-permanent workers

Most intervention studies have been conducted on employed workers. However, these show variable results in terms of reducing sick leave or improving RTW [17-21]. Research shows that a reduction in symptoms does not automatically lead to the recovery of functioning at work [17-19]. Scientific evidence on methods that successfully enhance RTW for workers with psychological problems is limited [20-22]. Only a few RTW studies on employed workers with psychological problems report favorable effects of work-directed intervention programs [17-19,23]. Work-directed interventions show that an early focus on work-related aspects, including work-related barriers, can improve and facilitate a timely RTW. However, it remains unclear whether work-directed interventions will be effective for sick-listed non-permanent workers, since there is no workplace to which they can return. Incorporating workplace options such as a temporary workplace or work placement/internship in RTW interventions of non-permanent workers proves to be a challenge. A study using a participatory RTW program for non-permanent workers with musculoskeletal disorders whereby a temporary (therapeutic) workplace was created showed more rapid work resumption, thereby helping to reduce work disability [24].
In addition, there is some knowledge available of prognostic factors for RTW in sick-listed employed workers with psychological problems [6]. In a review, strong evidence was found that older age (>50 years) is a negative predictor for RTW and is associated with prolonged work disability. Furthermore, limited evidence was found for the association of other personal factors (male gender, medium- or higher education, history of previous sickness absence, negative recovery expectations, low socio-economic status), health-related factors (stress-related and shoulder/back pain, depression/anxiety disorder), and external work-related factors (e.g., poor quality, quality and continuity of occupational care) with longer time to RTW and prolonged work disability. The question that needs to be addressed is whether these factors or other unknown factors apply to sick-listed non-permanent workers with psychological problems. Knowledge about these factors can help identify sick-listed workers with a high risk for work disability, and provide input for sickness absence counseling and development of RTW interventions. At the same time, it is essential to make a distinction between modifiable factors (e.g., recovery expectation) and non-modifiable factors (e.g., age), since the modifiable factors can be targeted with an intervention.

Finally knowledge is available from studies evaluating perceptions, barriers and solutions regarding RTW in employed workers. These studies show that the workers’ own RTW perception can predict RTW [25-27]. Such promoting factors for RTW include a positive recovery expectation, a good perceived health and work motivation [26,28]. Some factors impeding RTW are negative illness perceptions, an inefficient coping style, sickness behavior and low social support [28-30]. It is important to investigate whether these perceptions and factors also apply for non-permanent workers and to acknowledge that not only medical factors influence RTW. A better understanding of perceptions and factors that facilitate or complicate RTW can assist in developing effective interventions.
CHAPTER 1

Occupational health care for sick-listed non-permanent workers in the Netherlands

In many countries, sick-listing can only occur when an individual is (gainfully) employed. However, in the Netherlands, the Sickness Benefits Act provides a social security safety net for sick-listed workers that do not have an employment contract. After approval of the sickness benefit claim by the Dutch Social Security Agency (SSA), the sick-listed worker receives a supportive income, which is maximally 70% of the last daily wage, with a ceiling at 199 euros per day (2015). Due to this partial loss of income, these workers may face financial problems. The sickness benefit applies for a maximum of the first two years of sickness absence. There are no legislative mandates for these workers to be returned to their previous/last job. Since there is no employer or workplace to return to, the SSA is responsible for sickness absence counseling, vocational rehabilitation and the facilitating of RTW. Counseling and vocational rehabilitation is conducted by a team of occupational health professionals of the SSA, consisting of an insurance physician, a labor expert and a case manager. Furthermore, the SSA is responsible for performing general compulsory occupational health care activities as dictated by the Dutch Improved Gatekeeper Act. These activities include conducting a (medical) problem analysis and formulating an RTW action plan. The insurance physician of the SSA guides the worker according to principles described in the guidelines for occupational health care specified by the Netherlands Society of Occupational Medicine. The labor expert within the SSA is responsible for vocational rehabilitation support, while the case manager monitors the vocational rehabilitation process to evaluate the progress. Counseling by the SSA and sickness benefit terminates once the insurance physician has determined that full recovery of health and/or full work ability for the last performed work has been achieved, i.e., functional work limitations for the last performed work (with or without actual RTW of the worker) are no longer present. During the second year of sickness absence, full work ability to perform adjusted work with income equal to that earned during last performed work also can be taken into account as a criterion for ending the sickness benefit. If the worker is still partially or fully work disabled after 18 months, he/she can apply for a long-term disability benefit (disability pension) via the Dutch Institute for Employee Benefit Schemes (UWV).
The disability pension starts being paid out after two years of sick leave. This period is the same as for long-term sick-listed employed workers.

**Conceptual model for work participation of sick-listed non-permanent workers**

This thesis is focused on how work participation of sick-listed non-permanent workers with psychological problems can be promoted by investigating prognostic factors, perspectives of workers about RTW, and interventions that can influence work participation.

One of the primary problems these workers encounter is loss of control. Psychological problems can negatively affect people’s daily lives and work performance [31]. The difficulties people experience in performing routine activities at home, work, school or in other social areas are important reasons for seeking treatment or reporting sick, rather than the disease itself [32]. Work participation including RTW can be accomplished by the regaining of control and functional recovery of the sick-listed worker, preferably at an early stage of sick leave. Regaining control and functional recovery of the worker can be achieved by activating the worker, providing the worker with a daily structure filled with sufficient activities, removing barriers for RTW, and eventually (partial) RTW [33,34].

In order to reduce the negative consequences of the psychological problems and to stimulate recovery from symptoms and daily (work) functioning, several model-based approaches to guide and treat individual patients have been developed. Although there is no common adopted paradigm for RTW, many researchers in the field of occupational health have embraced the biopsychosocial model as a theoretical framework [35,36]. In this model, the individual is seen as a unit, with biological, psychological, and social perspectives within which an interaction of biological, psychological and social factors may contribute to physical and psychological symptoms. This model takes into account the influence of social-interactional factors on the private, work and health care environments. The social support of family, friends, colleagues, supervisors, and health care professionals, and the level of functioning in daily activities at home and at work
are also considered relevant in reducing the negative consequences of psychological problems. Based on the biopsychosocial model, the World Health Organization introduced the International Classification of Functioning, Disability and Health (ICF) [37]. The ICF model is an integrative approach proposing disability as a phenomenon resulting from a dynamic interactive process in which impairment in bodily functions and structures, and subsequent development of functional limitations (activity level) leads to restrictions at the participation level, all within the context of medical, personal, and external factors. Viewed from this perspective, work disability can be placed at the participation level.

Taking into account the above-mentioned generally accepted models in occupational health research and the positive findings of work-directed programs [17-19,23], it was hypothesized that activating work-directed interventions focused on the specific barriers and problems for RTW in the context of different environments (private, work/social and health care) of these non-permanent workers will promote work participation. To illustrate this approach, a conceptual model of how interventions might influence the work participation of non-permanent workers with psychological problems is described in figure 1, which is based on the biopsychosocial and ICF models. In line with the biopsychosocial approach, in addition to the mental health problems/impairments, the model includes the effects of individual/personal factors and external factors impeding work participation. Furthermore, based on the ICF model, improvement in functioning and restoring activities are integrated into the model as essential elements for participating in work/RTW.

In this thesis the focus is on the various factors or elements displayed in the four boxes of the conceptual model. The first step, prior to applying the model, is to evaluate what is known from previous research regarding this group of workers. The knowledge obtained can, where applicable, be supplemented in the model. The second step is to evaluate the barriers and problems for RTW according to three categories of factors: medical, external, and personal. This step can provide: (1) prognostic information regarding RTW (e.g., based on medical, external or personal factors); (2) insight into the specific barriers for RTW; and (3) information about perceptions regarding RTW (e.g., personal factors like recovery expectation).
The information from box 1 can be used in the intervention focusing on the barriers/perceptions and modifiable prognostic factors for RTW. Box 2 represents the activating intervention tailored to the severity and nature of the problems as evaluated in box 1. The goal of the activating intervention aimed at the specific barriers for RTW is to restore activities, and the functioning and regaining of control as described in box 3. The factors in box 3 are essential to achieve work participation as described in box 4.

To clarify the above-mentioned conceptual model, let us consider the following case. A 51-year old man with a medium-level education who has worked the past 15 years as a bus driver became unemployed (=external factor) six months ago and was entitled to receive a temporary unemployment benefit according to the Dutch Unemployment Benefits Act. He lost his job due to the economic problems suffered by the company he was working. For some reason he developed depressive symptoms (=medical factor), exacerbated by the prospect that finding a new job at his age would be difficult (=personal factor), and the economic crisis (=external factor). Furthermore, due to the loss of (part of) his income, he has run into financial problems and finds it difficult to maintain mortgage repayments (=external factor). This lack of perspective causes his psychological complaints to deteriorate. He becomes more and more inactive and experiences difficulties in performing routine activities at home (loss of control=medical factor). He finally decides to report sick, because he is not able to function properly. To approve his sickness benefit claim, he is invited to attend the consultation hour of the insurance physician of the SSA. During this meeting, he explains he has difficulties concentrating (=medical factor) and coping (=personal factor) with the situation (job loss, debts, etc.). Furthermore, he states that he is not expecting to be able to return to work within the next six months (negative recovery expectation=personal factor). The insurance physician evaluates the specific barriers for RTW and advises an intervention targeting the specific barriers and problems for RTW, including debt counseling, psychological treatment (e.g., focusing on his complaints, his inappropriate coping, cognitions, and negative recovery expectations) and possibly a temporary work placement or internship to improve functioning (=improvement in functioning). The insurance physician also offers him structure and advises him to stay active and to gradually resume his daily activities.
Figure 1  Conceptual model for work disability and work participation for workers with psychological problems without a permanent employment contract based on the biopsychosocial and ICF models

(*restoring activities*). Improvement in functioning and restoring activities should lead to the worker regaining control.
General introduction

3 Restoring activities

- Restoring activities
- Improvement in functioning/Functional recovery
- Regaining control

4 Participation/RTW

- Participation
  - Return to work
  - Work placement/internship
  - Volunteer work
Research initiatives aimed at the prevention and/or management of non-permanent workers at risk of permanent work disability can focus on different strategies. Evidence-based practice guidelines and interventions should be developed among professionals working in the field of occupational health and disability management [38-43]. Prognostic research can aid this process by identifying prognostic factors for work participation that can assist intervention development. In addition, qualitative research can help in understanding which underlying mechanisms and strategies workers with psychological problems use so that professionals can better target interventions towards the needs of clients. Furthermore, the scientific literature can be an aid to provide insight into potentially effective RTW interventions or strategies for this group of workers. Professionals working with non-permanent workers with psychological problems often also have good ideas about what works in daily practice and what does not, occasionally leading to valuable practice-based initiatives. In this thesis we explore several of these options as outlined in the respective chapters.

**Thesis objective and research questions**

The aim of the research described in this thesis is to promote the work participation of non-permanent workers who are sick-listed due to psychological problems.

The following research questions have been formulated:

1. Which factors and perspectives that influence work participation can be distinguished in non-permanent workers who are sick-listed due to psychological problems?
2. Which interventions improve the work participation of non-permanent workers who are sick-listed due to psychological problems?
Thesis outline

Research question 1 is addressed in Chapters 2 and 3.
First, Chapter 2 presents the results of a longitudinal cohort study. This study aimed to identify prognostic factors for the future work participation of medium- and long-term sick-listed unemployed and temporary agency workers and workers with expired fixed-term contracts with psychological problems.

Chapter 3 presents the results of a qualitative study evaluating barriers and solutions for RTW in the perspective of unemployed workers who were sick-listed due to psychological problems.

Research question 2 is addressed in Chapters 4 to 7.
Chapter 4 presents the results of a systematic literature review on the effectiveness of vocational interventions on work participation and mental distress for unemployed workers and an overview of the characteristics of these interventions.

Chapter 5 presents the development and qualitative evaluation of an adapted RTW guideline for sick-listed unemployed and temporary agency workers with minor psychological problems.

Chapter 6 describes the Brainwork Intervention and the design of a controlled clinical trial to study its effectiveness in reducing the duration of sick leave for sick-listed unemployed and temporary agency workers and workers with expired fixed-term contracts who have psychological problems, compared to care as usual.

Chapter 7 presents the results of a controlled clinical trial on the effectiveness of the Brainwork Intervention study in reducing the duration of sick leave.

Chapter 8 is the general discussion of this thesis, and includes the main research findings and recommendations for practice, policy makers and research.
REFERENCES


