

**Work ability assessment of  
employees on long term sick leave in  
Insurance Medicine**

The studies in this thesis were carried out at the Academic Medical Center, University of Amsterdam, department: Coronel Institute of Occupational Health, Amsterdam, the Netherlands. The Coronel Institute of Occupational Health participates in the Dutch Research Center for Insurance Medicine, which is a joint initiative of the Amsterdam Medical Center (AMC), the Dutch Institute for Employee Benefits Schemes (UWV), the University Medical Center Groningen (UMCG) and the VU University Medical Center (VUmc). The studies in this thesis were funded by the Dutch Institute for Employee Benefits Schemes (UWV).

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# **Work ability assessment of employees on long term sick leave in Insurance Medicine**

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# Chapter 1

## General Introduction



## **General Introduction**

### **The impact of long-term sick leave**

Long-term sick leave is a recognised socio-economic and socio-medical problem in most Western countries (1-4) with significant consequences for societies, organisations and individuals.

Long-term sick leave has substantial financial consequences due to workers' compensation, productivity losses, medical expenses, rehabilitation costs and additional costs for vocational rehabilitation programs (5). For the individual worker, long-term sick leave may result in a weakened financial position, social isolation and exclusion from the labour market (6-10). In addition, long-term sick leave has potential adverse effects on individuals, such as depression and low self-confidence (11-13).

The importance of early work reintegration has been acknowledged, and research shows that work may have favourable effects on health, well-being and the social environment (14-17). Workers on long-term sick leave have a poor prognosis for returning to work and, depending on the social-security system, many employees on long-term sick leave ultimately receive a disability pension (18-25). Previous episodes of sick leave increase the risk of long-term sick leave and disability pension (26,27). After a two year absence, the probability of returning to work is small (28).

### **Defining long-term sick leave**

Literature shows that there is no consensus about the definition of long-term sick leave, which makes it difficult to make comparisons between the results of studies. For instance, some authors define long-term sick leave as medical certified sick leave longer than six months (29), 90 days or longer (30-35), longer than 28 days (36,37), 8 weeks or longer (38,39), three weeks or longer (40-42), two or more weeks (43-45), longer than 9 days (46-47), longer than seven days (48) and longer than three days (49). These variations in the definition of the length of sick leave are mainly due to differences in social security systems, legislations and case definition across countries (50-52). Referring to the length of sick leave in consecutive days, months or years instead of just using the terminology "short-term, mid-term or long-term sick leave" could be a way to bring more uniformity in this research field.

## General Introduction

In this thesis, we define long-term sick leave as sick leave lasting for at least 18 consecutive months. The choice of this cut-off point is based on the Dutch sick leave insurance scheme. The Work and Income Act (53) that stipulates that individuals on sick leave can claim disability benefits after 2 consecutive years of sick leave. The studies in this thesis are focused on sick leave between 18 months and two years.

### **Measures to reduce work disability**

Governments in western countries have recognised the great impact of long-term sick leave on society and have taken a number of measures in the last decades of the last century to enhance work participation of sick listed employees and reduce work disability rates (50). For instance, employers have to take more financial responsibility in the work reintegration of sick listed employees, and companies are increasingly aware of the importance of taking measures to improve the work environment to prevent sick leave. Although measures promoting work reintegration have partially succeeded in reducing disability rates, long-term sick leave is still a substantial problem in many countries, e.g., in the Netherlands.

Many efforts have been made in the Netherlands the past 10 years to reduce the number of employees receiving disability benefits, including new social legislation, and the Dutch government stresses the importance of work for all people. Since the implementation of the Law on Gate keeping Disability Insurance in 2002 and the Work and Income (Employment Capacity) Act in 2006 (53), both employers and employees are responsible for work resumption during the first two years of sick leave, and employers are obliged to pay at least 70% of the employees' salaries during the first two years of sick leave.

The WIA was preceded by the Disability Insurance Act (WAO) (54), which was the national work legislation until January 2006. The WAO legislation resulted in large numbers of people receiving work disability benefits. According to the WAO legislation, employees on sick leave could claim disability benefits after one continuous year of sick leave. The new WIA legislation has stricter criteria for work disability and is focused on the residual functional capacities of the employee, rather than on his/her incapacity. The WIA has two aims: to promote work reintegration and to protect the income of employees who are unable to work due to incapacity caused by a medical condition. After the introduction of the

WIA Act in 2006, the number of new disability claimants was reduced considerably compared to the number of disability claimants during the WAO-period (55). Despite these measures, the magnitude of social benefits due to long-term sick leave is still considerable. For instance, in 2011, more than 138,000 people received disability benefits according to the Work and Income Act in the Netherlands, in 2012, more than 161,000 received disability benefits, and in 2013, approximately 185,000 disability pensioners are expected (56).

### **Work ability assessment of employees on long-term sick leave in the Netherlands**

Most employees on long-term sick leave who request disability benefits suffer from chronic diseases with functional impairment and need medical treatment, surgery or rehabilitation. When employees suffer from a medical condition, work resumption is expected within months, however, the return to work is often delayed, with long-term sick leave and chronic work disability as a result. For instance, 33,400 employees stayed on sick leave for at least two years in the Netherlands in 2012. Those employees who do not return to work within two years undergo work ability assessments and constitute the study population for this thesis.

In the Netherlands, financial compensation for long-term sick leave and disability benefits are granted on the basis of reduced ability to perform paid work due to a disease or an injury. According to the Dutch Social Security System, a worker on long-term sick leave can obtain a disability pension after two years of continued sick leave (53). The requirement for disability benefits is a physical or mental capacity to work that is permanently reduced by at least 35% due to a medical condition. Insurance Physicians (IPs) assess the work ability of employees on long-term sick leave according to standard assessment procedures, including guidelines and/or specific disease protocols (57-60). During a work ability assessment, IPs investigate whether and at which level the medical condition hinders the individual's ability to perform paid work. IPs should justify their decision based on medico-legal arguments.

To correctly assess the capacity to work, IPs should investigate factors associated with sick leave during work ability assessments. According to the Health Council of the Netherlands, the assessment of the ability to perform work after two years of sick leave should encompass social medical history, functional capacities, current treatment and prognosis

(61). In daily practice, however, the work ability assessment of employees on long-term sick leave is focused on functional capacity, indicating that IPs should fill out a report with a standard assessment and a functional-capacity list after performing work ability assessments (61).

### **Previous research in Insurance Medicine**

The economic, policy and legal aspects of work disability have been a topic of research since the 90's (62), however, research on insurance medicine is in an early phase. In contrast to other specialties in medicine that have a strong research tradition, insurance medicine is new to evidence-based practice. To illustrate this, the first Dutch guidelines for Insurance Medicine were developed and implemented between 2005 and 2009 at the Dutch Institute for Employee Benefit Schemes, which introduced evidence-based practice in insurance medicine (57-60). The last few years, many efforts have been made to optimise the evidence base of social-insurance medicine in the Netherlands. Disease-specific protocols are now available for diseases for which disability pensions are frequently granted, for example myocardial infarct, low back pain, chronic fatigue syndrome and breast cancer (57-60). Research on the object and the quality of the evaluations of work disability has been performed recently (63). Different methods to help IPs obtain information from the employee have been studied (64,65). Most methods are largely based on the workers' perceptions of their own capacities and disabilities. Functional-capacity evaluation (FCE) has also been investigated as a source of complementary information for work ability assessments (66). Research on employees with depression and acute coronary syndrome provided information on prognostic factors for work ability assessments for sick leave lasting at least 12 weeks (67), however, research on sick leave lasting longer than 18 months is still scarce, which means that the scientific basis to perform further research on long-term sick leave still needs to be developed. The studies presented in this thesis address work ability assessments of employees on sick leave for 24 months, regardless of their disease, as the assessments are performed in the Netherlands.

### **Developing a method to assess the work ability of employees on long-term sick leave**

This thesis is focused on factors relevant to the work ability assessment of employees on sick leave for at least 18 months. For this purpose, a methodology must be developed that helps to clarify the relationship

between the factors and the work ability assessment. The aim of this method is to clarify which steps IPs must follow to assess the factors associated with long-term sick leave during work ability assessments.

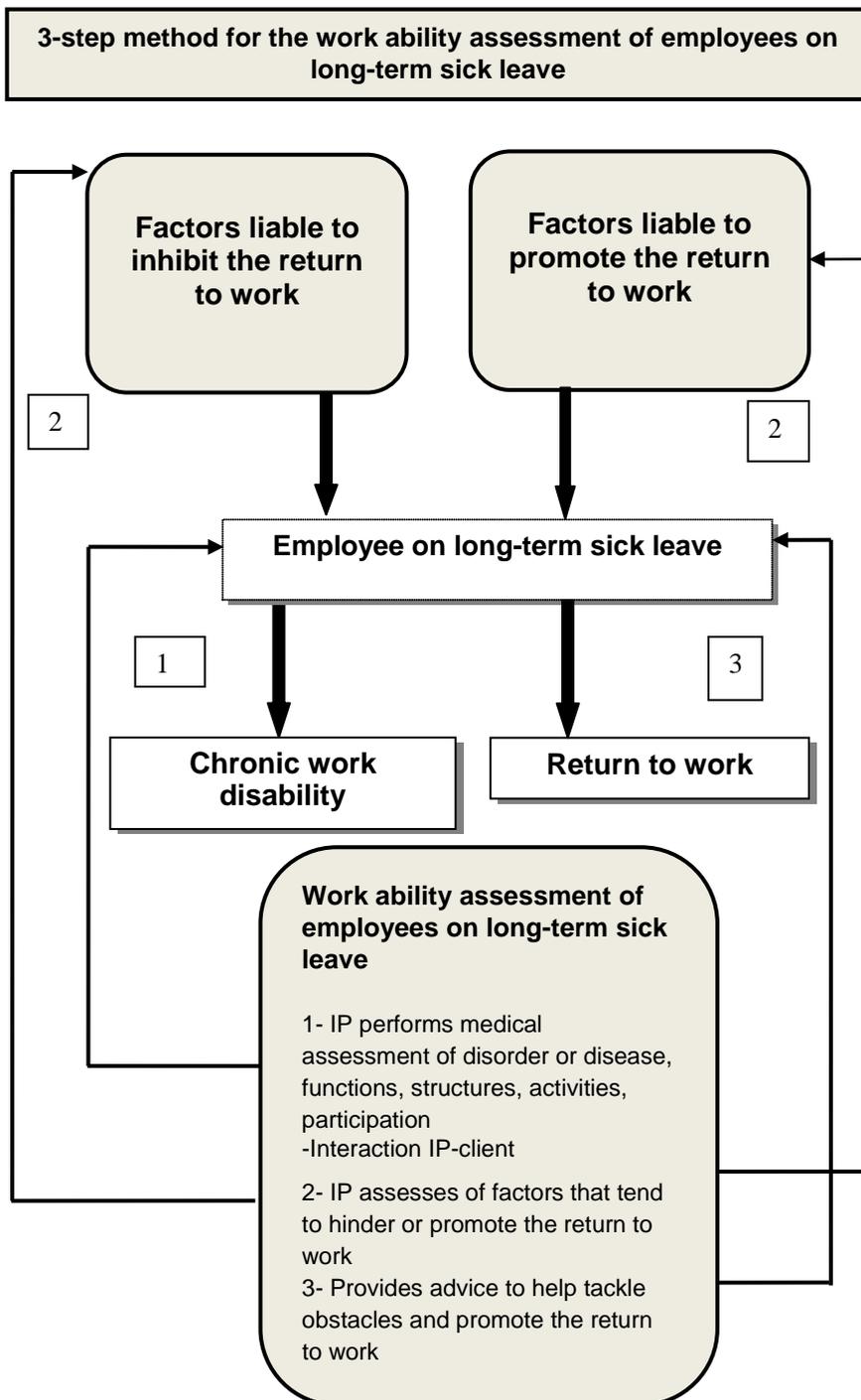
Figure 1 shows the 3-step method for work ability assessments of employees on long-term sick leave. The employee is the main actor and presents disorders, affected body structures, and restricted activities related to his/her medical condition. There is an interaction between the IP and the employee during the work ability assessment, in which the IP plays a crucial role.

The rationale behind this method is that there are two groups of factors involved in long-term sick leave:

1. Factors liable to hinder work.
2. Factors liable to promote work.

Factors from group 1 may lead to chronic work disability in people on long-term sick leave.

Factors from group 2 may promote a return to work among people on long-term sick leave.



**Figure 1.** Three-step method for the assessment of work ability of employees on long-term sick leave showing the crucial role IPs can play by assessing factors that hinder or promote work participation. Based on ICF, Dekkers-Sánchez et al, 2008 (68,69).

The proposed method contains the following steps:

1. Step 1 represents the work ability assessment as currently performed in the Netherlands.
2. In step 2, IPs assess the factors that hinder or promote work.
3. In step 3, IPs provide individualised advice to employees to reduce the factors that impede the return to work or stimulate the factors that promote the return to work.

In the next chapters, the results of the research studies in this thesis will show which factors belong to each group.

### **Objective of the thesis**

The aim of this thesis is to contribute to the improvement of the work ability assessment of employees on long-term sick leave by insurance physicians. For this purpose, knowledge about factors associated with long-term sick leave will be gathered. The generated knowledge about factors related to long-term sick leave will be used to develop a tool aimed to improve the quality of work ability assessments by IPs of employees on long-term sick leave.

### **Research questions**

The following research questions have been formulated:

- 1-Which factors hinder or promote work participation of employees on long-term sick leave?
- 2-Which factors that hinder or promote work participation should be taken into account during the work ability assessment of employees on long-term sick leave?
- 3-Is it feasible to implement a checklist to assess factors relevant for work ability in the daily practice of Dutch insurance physicians?

### **Outline of this thesis**

The first research question is investigated from different perspectives, including the international literature (chapter 2), from the perspective of employees on long-term sick leave (chapter 3), and the perspective of vocational-rehabilitation counsellors (chapter 4). The second research question is answered in Chapter 5 with a nationwide Delphi study under registered Dutch insurance physicians. The third research question is answered in Chapter 6, which describes the implementation study for the “checklist of factors relevant to work participation”.

In Chapter 7, the main research findings are summarised and discussed, and recommendations for practice and research are made.

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## **Chapter 2**

# **Factors associated with long-term sick leave in sick-listed employees: a systematic review**

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## **Abstract**

**Objective:** The objective of this systematic review was to investigate which factors are associated with continued sick leave among workers on sick leave for at least 6 weeks.

**Methods:** A systematic literature search was performed in Medline, EMBASE and PsycINFO, based on combinations of MeSH terms and free text words. Only cohort studies of workers on sick leave for more than 6 weeks at baseline were included. Outcome was measured in terms of factors related to long-term sick leave. The factors were classified first as predisposing, precipitating or perpetuating factors, and then as individual or work-related factors. Methodological quality was assessed for all studies and the strength of the evidence for each factor was assessed using the levels of evidence rating system.

**Results:** Five cohort studies fulfilled all inclusion criteria and 77 factors were investigated. Of these, 16 different significant factors associated with long-term sick leave were identified and were all classified as predisposing factors. Evidence was found for 14 individual factors and two work-related factors. The level of evidence was found to be insufficient for all factors except older age and history of sick leave, which were found to have weak evidence.

**Conclusions:** Based on this review, there is weak evidence that older age and history of sickness absence are factors associated with long-term sick leave in sick-listed employees. There is insufficient evidence for an effect of other individual or work-related factors on long-term sick leave. There are no published studies on perpetuating factors related to long-term sick leave.

## Introduction

Sick leave is a considerable public health problem with substantial financial consequences due to workers' compensation, medical expenses and productivity losses. For the individual worker, long-term sick leave may result in a weakened financial position, social isolation and exclusion from the labour market (1). Another potential negative consequence for the individual on long-term sick leave is the onset of other disorders such as depression (2). Workers on long-term sick leave have a poor prognosis of returning to work and, depending on the social security system, many end up receiving a disability pension (3,4). Numerous studies have explored the relationship between prognostic factors and the onset of short-term sick leave (less than 6 weeks) and in patient groups with defined diseases (5–7). Apart from disease, however, evidence is lacking for factors associated with continuance of sick leave once the worker has already been sick listed for some weeks. Most of the studies assess factors related to specific diseases (5, 8, 9).

We hypothesise that factors can predict long-term sick leave regardless of the disease-specific health problem of the individual worker. Wright (10) has supported this hypothesis by showing that non-medical factors such as delays in waiting for treatment and anxiety about return to work prevent early return to work. Martin et al (11) highlight the fact that in the case of long-term sick leave, there is usually an underlying medical condition, as well as other non-medical factors, which delays the return to work. Long-term sick leave is a complex phenomenon influenced by factors at different structural levels and the decision not to return to work may be the result of a combination of psychosocial, financial, organisational and medical factors (12). Despite the considerable costs of sickness absence, (1) the factors that perpetuate sickness absence have been poorly investigated.

In order to prevent long-term sick leave and subsequent transition to permanent disability (with a pension), it is important that health care professionals recognise the factors that can encourage or sustain long-term sick leave. The ICF (International Classification of Functioning, Disability and Health) (13) refers to health-related domains that describe body functions and structures, activities and participation. These domains can be influenced by work-related factors such as strenuous work and high job demands and by personal factors such as atti-

tudes, beliefs, lifestyle and behaviour, which can play an important role in the maintenance of work disability.

Most studies report the effect of structural damage and disease activity on the process of health functioning and consequent sick leave (14-17). Personal factors and environmental factors may also play an important role in the maintenance of sick leave. Early scientific studies on cohorts of healthy workers show the associations between physical and psychosocial factors and sickness absence.

Personal factors and environmental factors may also play an important role in the maintenance of sick leave. Early scientific studies on cohorts of healthy workers show the associations between physical and psychosocial factors and sickness absence (18–22).

However, little information is available on factors which, once the worker has been long-term sick listed, perpetuate sick leave.

The identification of factors that perpetuate sick leave can aid the (health care) professional in the selection or development of adequate interventions that help to prevent long-term absenteeism. The objective of this systematic review, therefore, is to investigate which factors are associated with continued sick leave among workers on sick leave for at least 6 weeks.

## **Methods**

### **Identification of studies**

We performed an extensive search of biomedical and psychological databases (Medline, EMBASE, PsycINFO and the Web of Science) from their inception until July 2007. All studies were independently examined by one reviewer (PD) and checked by a second reviewer. We combined search terms for long-term sick leave with search terms for factors in an effort to find all possible relevant articles. When available, subject headings such as MeSH terms in Medline were also added in the search strategy, in addition to free text words. A systematic search was conducted with the following MeSH terms and free text words in titles and abstracts: chronic sickness absence, sick leave (MeSH), absenteeism (MeSH), work disability, disability leave, return to work, perpetuating factors, sustaining factors and reinforcing factors (see appendix A for Medline, EMBASE and PsycINFO searches). Subsequently, the references of selected articles and recently published review articles were screened for additional publications and citation tracking using the

Science Citation Index was performed on those studies that were selected. Additionally, we performed a hand search of the most relevant journals in this field, such as *Occupational and Environmental Medicine*, *BMJ*, *Journal of Occupational and Environmental Medicine*, *International Journal of Rehabilitation* and *Journal of Occupational Rehabilitation*, from the last 7.5 years to verify the completeness of the literature search.

### **Selection of studies**

All titles and/or abstracts of the identified publications were screened for potential relevance regarding the aim of this review, which is to investigate the association between factors and sick leave/work-related outcomes. The first reviewer (PD) selected individual identified studies on the basis of title and abstract. The first selection was repeated by the second reviewer (JH) in a random sample. Studies were included if they described the relationship between factors measured at baseline and long-term sick leave or return to work.

In this review, sick leave at baseline was defined as sick leave lasting at least 6 weeks. The following specific inclusion criteria were used: (1) the participants had to be employed at baseline and be at least 18 years old; (2) participants had to have been on sick leave for at least 6 weeks at baseline; and (3) the study design had to be a cohort study. The definitive selection of articles was made on the basis of the full text article. Two reviewers (PD and JH) independently selected studies using a standardised list of selection criteria. Subsequently, the references of all selected articles and recently published review articles were screened for additional publications. After selection, the reviewers met to decide on the definitive selection of articles; in the case of disagreement a third reviewer (JS) made the decision.

### **Data extraction**

Data were abstracted by one reviewer (PD) and checked by another (JH) using standardised data extraction forms. Factors associated with long-term sick leave were classified in two main categories: (A) individual factors and (B) work-related factors. Secondly, the factors were classified according to Spielman's 3 Ps (predisposing, precipitating and perpetuating) factor classification, which is a useful model for organising various aetiological factors (23), as follows: (1) predisposing factors: pre-existing factors which increase the individual's general vulnerability for sick leave; (2) precipitating factors: conditions that evoke sick leave

at a certain moment; (3) perpetuating factors: variables that contribute to the maintenance of sick leave over time.

### **Quality assessment**

Two reviewers (PD, JH) assessed the methodological quality of the included studies on the basis of a standardised set of criteria that were adapted from criteria lists used in systematic reviews of observational studies (24). Any disagreements were resolved in a consensus meeting and with help of a third reviewer (JS) if necessary.

The following items were studied: (1) type of study population and description of demographic/clinical characteristics of participants; (2) response rate; (3) information completers versus those lost to follow-up; (4) main outcome measures; (5) description of the instruments to assess risk factors; (6) frequencies of risk factors; and (7) presentation of analyses data. The reviewers rated each criterion (positive, negative or unknown) on the basis of information provided in the article. Each study was assigned a total quality score (maximum 7 points) which was the sum of all positive ratings for the criteria on validity and precision.

Based on these seven criteria (see appendix B for further details), the studies were classified as high (5–7 points), medium (3–4 points) or low quality (0–2 points).

### **Levels of evidence**

To synthesise the information obtained from the studies, we used the levels of evidence method based on de Croon et al (9). The rating system was applied to each factor and consisted of four levels of scientific evidence based on the number and the outcome of the studies:

- Strong evidence: three studies available that find an association in the same direction, or four studies or more available, of which more than 66% find a significant association in the same direction and no more than 25% find an opposite association.
- Weak evidence: two studies available that find a significant association in the same direction, or three studies available, of which two find a significant association in the same direction and the third finds no significant association.
- Insufficient evidence: one study available.
- Inconsistent evidence: remaining cases.

## Results

### **Selection of studies and methodological quality assessment**

The electronic search resulted in 2527 citations, of which 433 articles were considered eligible based on title and abstract. A total of 86% studies were excluded as they were not related to long-term sick leave. Other reasons for exclusion were: (1) subjects were not workers; (2) workers were not on sick leave at baseline; (3) workers were on sick leave at baseline but were already unemployed; (4) workers were on sick leave at baseline but for a period of less than 6 weeks; (5) the study design was not a cohort study; and (6) the outcome did not meet the criteria.

Reviewing the full text resulted in the inclusion of five articles that fulfilled all inclusion criteria. In these five studies, 77 factors were studied and 16 statistically significant factors were identified. Of these five studies, four were of high quality and one was of medium quality. According to the 3 Ps classification system of Spielman, the 16 factors identified were classified as predisposing factors for long-term sick leave. Disagreement was related only to item C (appendix B, drop-outs/loss to follow-up). The results of the quality assessment are presented in table 1.

### Quality scores

The studies were classified as high (5-7 points), medium (3-4 points) or low quality (0-2 points).

**Table 1 Methodological quality scores for included articles**

Quality Criteria	Heijbel, 2006 (25)	Schroer, 2005 (26)	Gjesdal, 2004 (27)	Janssen, 2003 (28)	Van der Giezen, 2000 (29)
Study population	+	+	+	+	+
Follow-up response	+	?	?	+	+
Information completers versus those loss to follow-up	-	?	-	+	-
Main outcome measure	+	+	+	+	+
Instrument	+	+	+	+	+
Frequencies, risk factors	+	+	-	-	-
Analyses	+	+	+	+	+
<b>Quality score</b>	6	5	4	6	5

+ Method description in text meets criterion

? No method description about this criterion is mentioned in the text, so it is not clear if the method meets the criterion

- Method description in text does not meet criterion

### Short description of the five included studies

Heijbel et al (25) investigated if long-term sick-listed persons' own predictions of their future return to work have an impact on their return to work when controlling for other established factors. The authors investigated 15 variables associated with return to work in a cohort

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study of 525 persons on sick leave for more than 90 days and employed in municipalities and county councils in Sweden.

Schroer et al (26) studied the relationship between organisational characteristics and work disability. This prospective cohort study was performed among 455 employees of 45 profit and non-profit organisations in the Netherlands who were on sick leave for at least 6 weeks at baseline.

Gjesdal et al (27) studied the influence of medical aspects in addition to demographic factors in predicting subsequent transition to a disability pension. This prospective cohort study was performed among 3628 employees in Norway who had been sick listed for at least 8 weeks at baseline.

Janssen et al (28) investigated the prospective value of the demand-control-support model as a predictor of return to work 4 months after the onset of the sick leave episode. This prospective cohort study was performed among 795 employees who were sick listed for 6–8 weeks.

Van der Giezen et al (29) investigated the influence of psychosocial aspects of health and work in combination with economic aspects on return to work. The authors investigated prognostic factors of return to work in a prospective cohort study among 328 employees with 3–4 months of sick leave due to low back pain.

### **Factors associated with long-term sick leave**

In Table 2, the 16 significant factors are categorised in two groups: individual factors and work-related factors. Regarding individual factors, two studies showed that older age (25, 27) is related to long term sick leave. One study showed that female sex, history of sickness absence, having a low income, having mental health disorders and needing comprehensive rehabilitation are significantly related to long-term sick leave (27). Having been on sick leave for a period longer than 1 year, reporting more pain and reporting worse functioning are also associated with long-term sick leave (25). Having a subjective evaluation of poor general health status is associated with long-term sick leave (29). The risk of long-term sick leave and subsequent disability status increases strongly with age for both genders, but the risk of receiving a disability pension is significantly higher for women than for men in the age group 40-49 (27). Not-being the family's main wage

earner is also a significant factor for long-term sick leave (29). The own expectation of non-return to work and feeling not welcome back to work are associated with long-term sick leave (25).

As work-related factors for long-term sick leave, Janssen et al. (28) found that having a lower degree of skill discretion at work is associated with long-term sick leave. Furthermore, employees working in a non-profit company have an increased risk for long-term sick leave (26). Unemployment status in the year preceding inclusion increases the risk for long-term sick leave for women, but not for men (27). Workers with less job satisfaction have also an increased risk for long-term sick leave (29).

### **Results of the evidence synthesis**

Synthesis of the evidence concerning the factors reported in the five included articles showed that there is insufficient evidence for fourteen of the factors since we identified only one study for each of these factors. There is weak evidence for the two identified factors older age and history of sickness absence since we identified two studies for each of these two factors.

**Table 2 Factors associated with long-term sick leave**

<b>Individual factors</b>	<b>Study</b>	<b>OR/RR</b>	<b>(95% CI)</b>
Poor general health (SF36)	Vd Giezen, 2000	OR 1.6	1.3-1.8
Not being the family's main wage earner	Vd Giezen, 2000	OR 2*	1.3-3.4
Older age (>50 yrs old)	Gjesdal, 2004	RR: 7.5 (♂) RR: 6.1 (♀)	5.3-10.6 4.6-8.1
Older age (>55 yrs old)	Heijbel, 2006	OR 2.2*	1.3-3.7
Low income	Gjesdal, 2004	RR 1.6 (♂) RR 2.6 (♀)	1-2.45 1.4-4.6
Unemployment status 1-12 months	Gjesdal, 2004	RR 1.3 (♀)	1-1.7
Mental health disorders	Gjesdal, 2004	RR 1.5 (♂)	1.1-2.1
History of sickness absence >100 days	Gjesdal, 2004	RR 1.5 (♂)	1.1-2.1
Duration of sick leave >1 yr	Heijbel, 2006	RR 1.6 (♀) OR 2.7*	1.2-2.1 1.8 -4.1
Assessed to be in need of comprehensive rehabilitation	Gjesdal, 2004	RR 4.3 (♂) RR 2.3 (♀)	3.1-6.0 1.7-3.2
Own prediction of non-RTW	Heijbel, 2006	OR 16.0*	6.9-37.3
Having more pain**	Heijbel, 2006	OR 5.5*	2.7-11.1
Having worse function**	Heijbel, 2006	OR 2.7*	1.4-5.2
<b>Work related factors:</b>	<b>Study</b>	<b>OR</b>	<b>(95% CI)</b>
Having less job satisfaction	Vd Giezen, 2000	1.2	1.1-1.3
Lack of skill discretion	Janssen, 2003	1.4	1.0-1.7
Non-profit organisation	Schroer, 2005	2.2	1.2-4.2
Perception of not being welcomed back to work	Heijbel, 2006	1.9	1.2-3

\* Crude (not-adjusted) odds ratios for individual factors associated with long-term sick leave. \*\*compared to persons in the quartile with the least pain/least impairment of function. ♂ men ♀ women

## **Discussion**

In this review we identified five studies that fulfilled all inclusion criteria. These studies seem to confirm our hypothesis that there are significant predisposing factors which, regardless of the disease specific health problem of the individual worker, are associated with long-term sick leave. In total, 16 significant factors associated with long-term sick leave were identified. Based on the results of this review we conclude that there is limited evidence that two factors, i.e. older age and history of sickness absence, are associated with long-term sick leave.

### **Methodological considerations**

Analysis of the international literature on long-term sick leave shows that the description and the definition of “long-term sick leave” is not standardised. In most of the studies we retrieved during our literature search there was no distinction between short-term sickness absence and long-term sickness absence. Some authors define long-term sick leave as a period of at least 3 days (30-32) while others define it as a period of 6 weeks (33) or even 8 weeks (27,34,35). In this review, long-term sick leave was defined as absenteeism for 6 weeks or more. The decision to consider a period of 6 weeks’ sick leave in this study was based on the Dutch social security legislation. We recognize that employment conditions, social and insurance conditions vary from country to country and may influence outcomes such as disability pension and work disability. In spite of this, we have identified 16 factors that could prolong long-term sick leave.

We have reasons to believe that, once sickness has developed, several maintaining factors can impede recovery. Different types of processes (intrinsic and extrinsic) seem to be involved in the maintenance of sickness and long-term sick leave. The classification of factors into predisposing, precipitating and perpetuating is useful for grouping aetiological factors and can help identification of the different factors/conditions involved in long-term sick leave and selection of the best interventions. We use the 3 Ps classification of Spielman to describe the factors associated with long-term sick leave. This classification has been used for assessing insomnia, but has also shown to be useful in describing other chronic conditions such as chronic fatigue syndrome (36) and chronic upper extremity musculoskeletal complaints (37). All identified factors in this study were predisposing factors. We originally planned to study

perpetuating factors for long-term sick leave in order to get more insight into the mechanisms involved in the maintenance of sick leave over time. However, no perpetuating factors were found in this review, nor did we find any studies on precipitating factors. Much literature has been published about the socio-economic effects of long-term absenteeism and subsequent disability leave, but at the same time little is known about the factors involved in the maintenance of sick leave once the employee has been sick-listed.

### **Conclusions and Recommendations**

In this review, 16 factors each associated with long-term sick leave were identified. Limited evidence was only found for the factors older age and history of sickness. All 16 factors were classified as predisposing factors for long-term sick leave. Despite an extensive literature search, no perpetuating factors for long-term sick leave could be identified. Knowing what sustains long-term sick leave can aid health care professionals to (1) identify the obstacles for return to work, (2) select adequate interventions to reduce or eliminate these obstacles, and (3) prevent long-term sick leave. For the identification of perpetuating factors more prognostic studies should be designed to generate valid information and a new hypothesis. The ICF (International Classification of Functioning, Disability and Health) (13) could be a valuable tool to frame the complex factors associated with long-term sick leave. Studies focusing specifically on the patient's ideas regarding their sick leave, including designs that use concept mapping or focus groups, could also be useful to explore relevant factors.

### **Main messages box**

- There is weak evidence that older age and history of sickness absence are associated with long-term sick leave in sick-listed employees.
- There is insufficient evidence that work-related factors are related to long-term sick leave in sick-listed employees as few studies exist.
- Variables that contribute to the maintenance of sick leave over time remain poorly investigated.

### **Policy implications box**

More prognostic research concerning non-medical factors for long-term sick leave is needed so that appropriate interventions can be selected to prevent transition from sick leave to work disability.

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## **Appendix A**

### **Search history for PubMed**

1. perpetuating factors
2. sustaining factors
3. reinforcing factors
4. sickness absence
5. work disability
6. long-term sickness absence
7. chronic work disability
8. long-term sickness
9. long-term absence
10. chronic sickness absence
11. sick leave
12. absenteeism
13. long-term work disability
14. disability leave
15. return to work
16. 1 or 2 or 3
17. 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14
18. 15 and 16
19. 16 and 17

### **Search History for EMBASE**

1. perpetuating factors.mp.
2. sustaining factors.mp.
3. reinforcing factors.mp.
4. chronic sickness absence.mp.
5. absenteeism.mp.
6. long-term work disability.mp.
7. disability leave.mp.
8. sickness absence.mp.

9. work disability.mp.
10. long-term sickness absence.mp.
11. chronic work disability.mp.
12. long-term sickness.mp.
13. long-term absence.mp.
14. return to work.mp
15. 1 or 2 or 3
16. 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13
17. 14 and 15
18. 15 and 16

**Search history for PsycINFO:**

1. reinforcing factors
2. sustaining factors
3. perpetuating factors
4. sick leave or absenteeism or long-term work disability
5. disability leave or sickness absence or work disability
6. long-term sickness absence or chronic work disability or long-term sickness or long-term absence
7. return to work
8. 1 or 2 or 3
9. 4 or 5 or 6
10. 8 and 9
11. ("Health attitudes" in MJ, MN) or ("Health Behavior" in MJ, MN) or ("Health-Education" in MJ,MN) or ("Psychosocial-Factors" in MJ,MN)
12. ("Diagnosis" in MJ,MN) or ("Etiology-" in MJ,MN) or (Risk-Factors in MJ,MN)
13. 10 and 11 and 12
14. 7 and 11 and 12

## Appendix B

### Methodological quality list

Item		Score
<b>A</b>	Description of study population: positive if described in what (occupational) setting the participants were recruited (i.e. insurance board, companies, population)	+/-/?
<b>B</b>	Positive if total number of drop-outs/loss to follow up <20% at the last moment of follow up	+/-/?
<b>C</b>	Information (completers) versus loss to follow-up/drop-outs: positive if demographic/clinical information (participants characteristics such as age, sex and other potential factors) was presented for (completers) and those lost to follow up/drop-outs at the main moment of outcome measurement, or no drop-outs/loss to follow up	+/-/?
<b>D</b>	Description of main outcome measure (sickness absence)	+/-/?
<b>E</b>	Description of the instruments used to assess the risk factors. Standardised assessment of patient characteristics and potential risk factor(s) including physical/environmental, mental, work-related, psychosocial and individual factors	+/-/?
<b>F</b>	Frequencies of all risk factors: positive if frequency, percentage or mean, median (interquartile range) and standard deviation/CI are reported for all factors	+/-/?
<b>G</b>	Analyses: positive if univariate crude estimates are reported. Positive in case hazard ratios, odds ratios, relative risks, or relative risk ratios are presented. Negative if correlations are reported	+/-/?

- + positive
- negative
- ? not clear



## **Chapter 3**

# **A qualitative study of perpetuating factors for long term sick leave and promoting factors for return to work: chronic work disabled patients in their own words**

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## **Abstract**

**Objective:** Chronic work disability generates high financial costs for society and causes personal suffering to patients and their families; however, crucial knowledge about the factors associated with long-term sick leave is still missing. This study provides insight, from the perspective of chronic work disabled patients, into the perpetuating factors for long-term sick leave and promoting factors for return to work.

**Patients and methods:** Five focus group interviews were conducted with 27 patients with different disorders who had been on long-term sickness absence (18 months or more). Qualitative data analysis was performed using a conceptual framework to identify barriers and enablers for return to work.

**Results:** Four main themes of important perpetuating factors for long-term sick leave were identified: health-related obstacles, personal obstacles, social obstacles, and work-related obstacles. Four main themes of important promoting factors for return to work were identified: favourable working conditions, positive personal characteristics of the employee, the influence of the social environment, and the influence of the personal economic situation.

**Conclusions:** Besides sickness, several non-medical factors are recognized barriers for return to work. Factors such as illness perceptions and self-efficacy expectations are reported to be promoting factors for return to work.

## Introduction

Long-term sick leave constitutes a major economic and social problem (1). In most European Union (EU) member states the proportion of people who leave work permanently due to long-term sick leave exceeds the proportion of people who are excluded from the workforce for other reasons, and the costs of disability leave are much higher than the costs of unemployment (2, 3). Individual patients on long-term sick leave have a high risk of economic and social deprivation. These patients face considerable obstacles in returning to work (4). Many of them develop a more chronic disability, depression, and undergo a decline in mental health as a result (5, 6). Sufficient evidence suggests that employment is beneficial to health, and that this benefit is lost without paid work (7, 8). A recent study found that re-employment of people who have involuntarily lost their jobs leads to a recapturing of past mental health status (9). Governments in the EU have taken different measures to reduce high disability rates (10). Some of these measures include increasing employers' financial responsibility in this area and setting up collective agreements on the work environment. Although these measures have partially succeed in reducing disability rates, long-term sick leave remains a substantial problem.

Chronic work disability has been defined as work disability during more than 90 days since the date of injury (11). Long-term sick leave in this study is defined as sick leave during more than 6 weeks according to Dutch legislation (12). In the Netherlands, the occupational physician together with the employer and the employee are responsible for the work rehabilitation of the sick-listed employee during the first 2 years of sick leave. Sick-listed employees can apply for disability benefits after 1.5 years sick leave.

Long-term sick leave and chronic disability are complex issues that are not only determined by disease-specific health problems, but are also influenced by a variety of non-medical factors that may intensify and perpetuate each other and, consequently, the duration of disability (13). Knowledge of the patients' perspective on matters related to their health has proven to be a valuable complement in previous clinical research (14-16). Knowing patients' values and perceptions can help increase self-efficacy and feelings of control over the illness (15). Several studies have shown the importance of patient-

centred care (17). It has also been shown that patients prefer to take either an active role or a shared decision-making role (18). In the present study we investigated the perceptions of patients who had been on sick leave for between 18 and 24 months.

Research on musculoskeletal disorders, the most documented and common medical causes of long-term sickness absence, shows that the longer a person is on sick leave the less likely he or she is to return to work. After 6 months off work, less than 50% of people will return to work, and after 2 years absence, there is a decreased chance of the person returning to work (19). A recent literature review found that, despite the great importance of this issue, most studies focus on predisposing factors for long-term sick leave and less on perpetuating factors among patients on sick leave for at least 6 weeks (12).

Return to work and disability have been studied from various perspectives, e.g. biomedical, psychosocial and economic. Many models of disability and return to work are based on the biopsychosocial model (20), which emphasizes the interaction among medical, psychosocial and system-based factors. The International Classification of Functioning, Disability and Health (ICF) (21) model of disability of the World Health Organization (WHO) is an integrative, biopsychosocial-based model that emphasizes the interaction between the individual and his or her environmental context as an important determinant of disability.

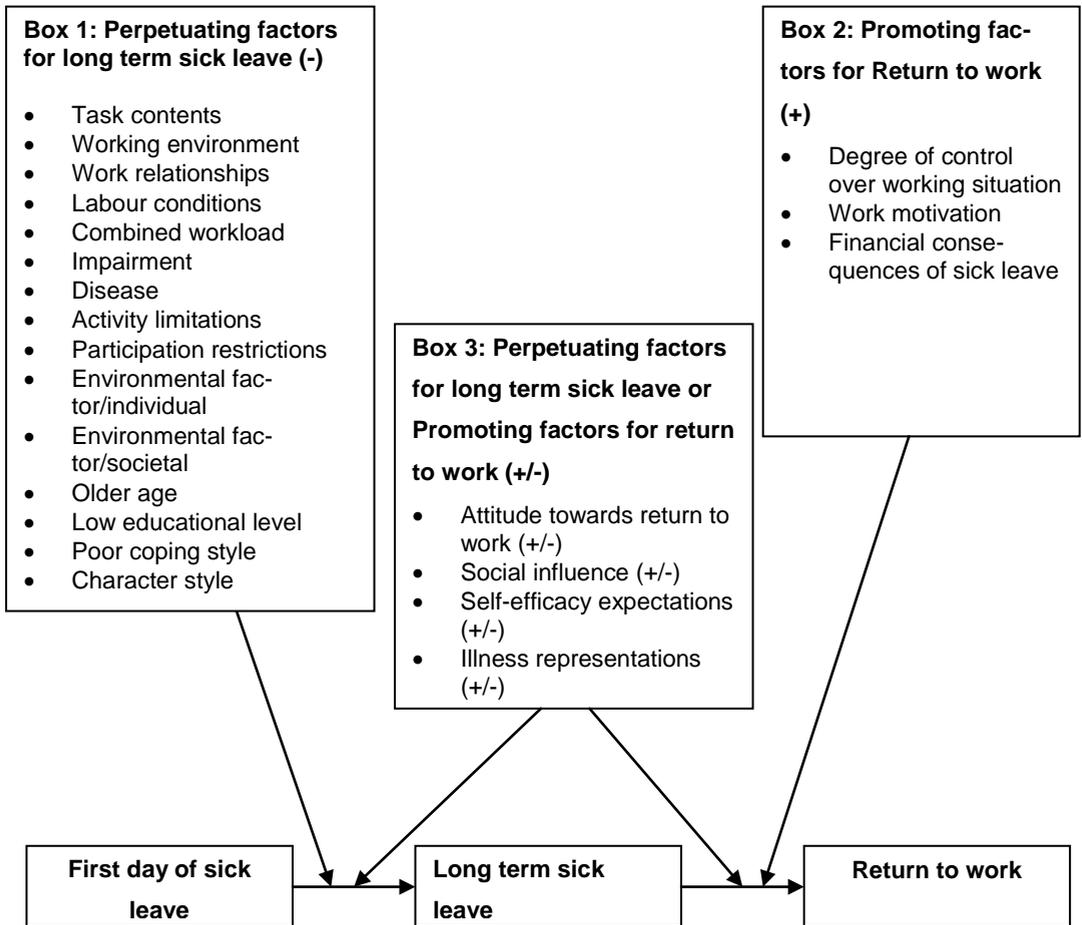
In order to facilitate insight into the complex factors related to work disability, we constructed a model of perpetuating factors for long-term sick leave and promoting factors for return to work, based on the ICF and (fragments) of different models (21-25). Each of the original models addresses concepts related to disability and sickness absence. The choice for these factors was based strictly on its relationship with long-term sick leave. Only the factors that are mentioned in the literature as being directly related to long-term sick leave are included in the model.

The model conceptualizes the possible relationship between factors such as degree of control over the working situation, work motivation, financial consequences of sick leave, and return to work. The first group of factors are the perpetuating factors of sick leave (26). The

second group of factors are the promoting factors for return to work that impede the transition to long-term sick leave or permanent disability. We hypothesize that there is also a third group of factors that could act either as barriers or as promoting factors for return to work, which are based mainly on the individual characteristics of the patient (Fig. 1).

However, because crucial knowledge about the perpetuating factors of work disability and long-term sick leave is still missing, the aim of the present study was to study the perspective of chronic work disabled patients themselves on the perpetuating factors for their long-term sick leave and the promoting factors for their return to work.

**Figure 1 Model of perpetuating factors for long term sick leave and promoting factors for return to work.**



Based on: ICF (21), Van Dijk et al.(22), Leventhal (23), De Vries et al. (24), Vrijhof et al (25).

## Methods

### Design

Focus groups were used to investigate the perceptions of chronic work disabled patients regarding the perpetuating factors associated

with their long-term sick leave and the promoting factors for return to work.

### **Participants**

Purposive sampling was employed to recruit chronic work disabled patients from 5 different geographical regions in the Netherlands. The population was retrieved from the databases of the Dutch Patients Insurance Authority (UWV), which records chronological details of sick-listed patients who meet eligibility requirements for benefits under the Disability Benefit Act. Eligible subjects for this study included patients who were sick-listed for at least 18 months and met the eligibility requirements for a disability pension. Sick-listed employees between 18 and 65 years of age who are unable to work due to medical reasons can apply for a disability pension after a 1.5 year period of sickness absence. The other eligibility criteria were that patients could speak Dutch and were willing to talk in a group setting about the factors that influenced their sick leave. This study was presented to the medical ethics committee of the Academic Medical Centre (AMC), University of Amsterdam, which concluded that no formal approval for this research was necessary, according to the Medical Research Involving Human Subjects Act.

### **Subject recruitment**

Focus groups were held following the standard focus group methodology (28). Eligible subjects were initially approached about focus group participation by post and received written information concerning the aim and procedures of the study from the UWV office. Participants were required to complete a consent form and return it to the researchers. When they agreed to participate, information was sent about the location and time of their assigned focus group. The participants were selected on the basis that the focus groups should capture a full range of views from a large range of sick-listed employees, which could represent the population of sick-listed employees in the Netherlands. To ensure a wide representation, we approached a heterogeneous sample of employees living in all 5 geographical regions in the Netherlands, with different demographics and working settings. This recruitment procedure assured a final sample of great diversity. The participants shared only one characteristic: all of them were sick listed for longer than 18 months. This common characteristic facilitated exchange of information between the group members.

### **Focus groups**

We conducted 5 focus groups, covering a wide representation of views. The focus groups continued until data saturation was achieved; this occurred after 4 focus group interviews, and was confirmed with the fifth focus group. The group interviews were carried out by physicians with extensive experience in interviewing patients who had also been specifically trained to conduct focus groups (PD, HW). Special emphasis was placed on informing the group members that participation was voluntary and anonymous. Patients were assured that the information was to be used only for research purposes and would not have any effect on the outcomes of their disability claims. The focus groups were conducted by 2 moderators using a structured moderator guide developed by the research team. The focus groups were all conducted by a moderator and an assistant-moderator. The moderator facilitated the discussion, assured that all participants had the opportunity to participate, and encouraged all participants to generate responses based on their own personal experiences and points of view. The assistant-moderator took notes during the focus groups, assessing non-verbal communication. The notes comprised information about non-verbal behaviour, group dynamics and spontaneously emergent topics. The information about non-verbal data showed that the participants, who were strangers to each other, felt free to talk about their experiences. Each focus group lasted approximately 2 hours and consisted of semi-structured discussions regarding barriers and facilitators for return to work while on long-term sick leave. The key questions were open-ended and non-directive, and the answers were further explored by the moderator. Following the structured moderator guide, the same topics were raised, in the same order, in each group. The key questions in the focus groups and their order were as follows: (i) What is/are the reason(s) for not returning to work? Is this the only reason, or are there other reasons? (ii) What would enable you to return to your own work? What would enable you to perform modified work? (iii) Do you think you can return to work in the future? If not, why not?

### **Data sampling and analysis**

The focus groups were both hand-recorded and audio-taped on site, with permission from the participants, and then fully transcribed into verbatim narratives for data analysis. The assistant moderators kept field notes during the interviews, documenting non-verbal data. For the analysis of the data a modified framework approach was used. A

thematic framework was constructed based on the conceptual model of perpetuating factors for long-term sick leave and promoting factors for return to work (Fig. 1). The data were analysed in multiple stages, based on recommendations by Pope's & Mays (29). The transcripts were first compared (by PD) with the audio recordings to ensure accuracy of content and to integrate field note data into the account. The team of researchers discussed their interpretations of the data and reached consensus about a coding scheme. The research team read all 5 transcripts and noted the themes of interest in the text in a process of open coding. The team of researchers met several times to discuss the transcripts and the open codes that were identified by the individual researchers until consensus was reached about the different codes. A final list of open codes was developed based on the meetings. Evidence that did not seem to fit was sought throughout the analysis, and emerging ideas and themes were modified in response. The open codes were placed into the theoretical framework and were categorized according to the conceptual model into 2 different groups: perpetuating factors and promoting factors. The following procedure was used to distribute the statements in the correct box of the conceptual model. A list of definitions of all the factors included in the conceptual model was made to ensure correct use of the terminology. For this purpose, only the definitions used by the authors of the original models were used. A list of all original definitions of the factors is available. The statements were categorized in each specific box according to the original definition (by PD). The categorization of the statements was discussed with the other members of the research team to ensure a correct categorization of statements. The statements were categorized in the box that fitted the best, according to the meaning units of the text. The choice of the boxes was strictly based on the meaning units of the original text. Consensus meetings between all authors led to the rearrangement of the factors into the different groups, which resulted in the categorized list of statements presented in the results section.

## Results

Seventy-five patients living in 5 different regions (5 offices x 15 patients,  $n = 75$ ) who met the inclusion criteria received an invitation letter to participate in the study. Of the 75 patients contacted, 48 responded to the recruitment method. Two were unable to participate at

the time the focus group took place, 10 indicated that they were not interested or could not participate for other reasons, 4 cancelled, 5 were no-shows; a final total of 27 participants were included in 5 focus groups. The study took place in January–February 2008. Our sample included most categories of chronic work disabled patients regarding socio-demographic characteristics and diagnosis, including cancer, rheumatoid arthritis, repetitive strain injury, severe heart and lung disease, burn-out, and bipolar disorder. The groups included 4-7 patients. The average age was 49 years (range 25-63 years); 14 patients were male. Our sample included employees from different working sectors, employer sizes, socio-economical, and cultural backgrounds, living in all different regions in the country. They were both blue-collar and white-collar, with educational levels ranging from elementary school to university. Non-native employees were also included in the sample. Most participants had still a contract with their employer after the period of 18 months on sick leave. Some of them no longer had an employer or had lost their jobs in the first 2 years of sick leave. Table 1 shows socio-demographic characteristics, diagnosis and work-related parameters for the participants at 18 months after the first day of sick leave.

**Table 1 Characteristics of patients at time of focus group**

<b>Characteristics</b>		
Age at time of focus group (mean/range in years)	49	(25-63)
Age at injury/ onset disease at baseline (mean/range in years)	47	(23-61)
Sex (male) n (%)	14	(52)
Times patients attempted return to work (mean)	4	
Working part-time on modified work, n (%)	9	(33)
<i>Education:</i>		
	n	(%)
Lower	12	(44)
High school	6	(22)
College/university	9	(33)
<i>Type of occupation at onset sick leave:</i>		
	n	(%)
Manual	8	(40%)
Clerical or catering worker	4	(15%)
Service	6	(22%)
Professional	9	(33%)
<i>Diagnosis at onset sick leave:</i>		
	n	(%)
Heart & lung disease	1	(4)
Cancer	5	(19)
Musculoskeletal disorder	8	(30)
Mental disorder	7	(26)
Gastrointestinal disorder	1	(4)
Neurological disease	4	(15)
Eye disease	1	(4)
Comorbidity	17	(63)

On average 18 months after the first day of sick leave (maximum 24 months after the first day of sick leave). (n=27)

### **Perpetuating factors for long-term sick leave**

There were 4 main themes of important perpetuating factors for long-term sick leave identified by the focus groups: health-related obstacles, personal obstacles, social obstacles, and work-related obstacles. These themes are described in Table 2. Table 2 describes the categories of perpetuating factors using selected quotations from the focus groups to illustrate the most important issues. The participants' statements were grouped according to the conceptual model.

#### **Health-related obstacles**

Disease and impairment were major issues mentioned by participants in the focus groups. Limitations in work due to fatigue were seen as important impairments in preventing patients from performing an essential duty of their job. Other impairments included difficulties performing work due to physical limitations, pain, diminished sight, inability to use the extremities after surgery, decreased memory and concentration, emotional problems, and stress. Patients mentioned specific health problems such as cancer, repetitive strain injury, rheumatic arthritis, asthma, diseases of the eyes, kidney, or lung, occupational diseases, and mental illness (Table 2).

#### **Personal obstacles**

Older age, low educational level, poor coping style, character style, and combined work load (i.e. the combination of domestic duties and work), were identified as perpetuating factors for long-term sick leave. Having a low educational background interfered with performing new (modified) work. Some personal factors, such as character styles and coping styles, also acted as perpetuating factors for long-term sick leave. Personal problems, such as family separation and financial problems, were mentioned as causes of severe emotional symptoms and sleep disturbances, which perpetuate sick leave. Many patients emphasized that older age prevented them from returning to work or seeking a new job. This is illustrated by the following quotes: "*Who wants to employ a 57-year-old man with sight problems and degenerative disease?*", "*60 years old, that's a barrier*". Participants had an expectation to not return to work anymore or that no company would be willing to employ them. Some sick-listed employees had very specific ideas about their health condition, prognosis, and the facts involved with their sickness. Some of them emphasized that they were not able to work at all or to get back in their

own work or in modified work because of their complaints. Some other patients said that they would never return to work because they found that they were seriously ill and that they had already worked long enough. A number of patients said that their recovery would take a very long time and that they would not be able to return to work. According to the conceptual model, these perpetuating factors, which are inherent to the individual patient, were classified as attitudes toward return to work, self-efficacy expectations and illness representations (Fig. 1, box 3).

### **Social obstacles**

Different societal factors, particularly the health insurance system, participation restrictions, and lack of cooperation from medical professionals and counsellors were seen as important barriers impeding return to work. Long-term chronic work disabled patients found that societal factors, such as lack of availability of medical devices and uncertainty about medical treatment, slowed their healing process. Some patients mentioned disease management problems as one of the main barriers to recovery and return to work. Some of them found that they did not receive adequate assistance during their sick leave period and that the health authorities were inefficient and slow, which increased the feelings of anxiety and uncertainty about their future. An employee emphasized this with the statement: *"They expect you to pull yourself out of the swamp"*. Besides medical-related factors the participants mentioned inappropriate guidance in the return to work process, and a lack of vocational rehabilitation counselling as important barriers to return to work.

### **Work-related obstacles**

The lack of cooperation from employers, task contents, work relationships, the lack of modified working conditions were seen as important perpetuating factors. The work-related factors mentioned by the patients were problems performing specific tasks because of physical or mental impairments that interfere with or prevent normal achievement in a particular area, for example: *"I can't crawl under or climb above machines any more"*; *"I want to keep fixing streets, but I can't do it any more with my knees"*; or *"If somebody else has to correct your work, then that doesn't make progress"*. Patients often mentioned poor working relationships as a perpetuating factor for sick leave. The patients emphasized this by using statements such as: *"I had no cooperation from my employer"*; *"I had a work conflict"*; *"I could have returned to*

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*work earlier, and my employer should have sought adapted work for me, but he didn't". Many patients expressed their inability to work the same number of hours in a week with statements such as: "I can only work 2 days a week"; or "I'm not able to work longer than 4 hours a day". Patients also mentioned unavailability of modified work.*

**Table 2 Perpetuating factors for long-term sick leave generated by the chronic work disabled patients.**

Categories	Statements from patients
<p><b>1. Task contents</b>                      Inability to perform specific work tasks in own work.                      Problems manipulating work materials and heavy hand tools.                      Committing errors when performing accurate work</p>	<p>“My own work is too heavy”;                      ” I am no longer able to manipulate a screwdriver or a pair of pincers”;                      ” If I hold a table saw twice then they can carry me away”;                      “If I make a mistake, somebody else has to check my work again. And that’s too expensive”.                      “I can’t pull patients any more after my breast cancer operation”;                      “My employer had only heavy work at the company, and I am not longer able to perform it”.</p>
<p><b>2. Work relationships</b>                      Poor working relationships with employers.                      Conflicts between sick-listed employees and their superiors.</p>	<p>“I have been sick for 22 months and my supervisor has never asked me how I am doing”;                      “It is not just a medical problem, it has turned into a real conflict”;                      “My boss doesn’t want me back because of the financial aspect”;                      “I was fired because of my illness”.</p>
<p><b>3. Combined workload.</b>                      Combining specific work demands and care for own children. Not being able to work the number of hours in a week that the employee normally would work because of the care for own children</p>	<p>“I am happy that I am able to care for my two young children, but I could not cope with caring for seven children with behaviour problems”;                      “I can only work two days a week, I have to care for my two young children”.</p>
<p><b>4. Impairment</b>                      Functional limitations                      Preventing sick-listed employees from performing an essential duty of their job.</p>	<p>“I can only work two days a week because of fatigue”;                      “I can’t do my own work because of a double mastectomy”;                      “After my operation I could not use my shoulder any more”;                      “My memory and my concentration have decreased”;                      ” I have pain in my whole body”.</p>

**5. Disease**

“My limitations are only of medical origin”; “I just have a great medical problem which makes it impossible for me to do any substantial work”; “There is no treatment for my disease”; “Two years are too short for recovery if you suffer a severe illness”

**6. Participation restrictions**

Inability to participate in everyday activities.

“I am not able to drive a car anymore”; “After a workday I don’t have energy left to perform other activities at home”; “I am not longer able to play a sport”.

**7. Environmental factors / individual**

Participation problems of individual origin

“I can’t live in peace, eat or sleep any more. My family is separated since two years”;  
“I am getting crazy of all these problems, I can’t pay my bills; my private situation is very difficult, I can’t change it “;  
“I can’t work because of my private problems, I don’t want to live anymore with these problems”.

**8. Older age**

“Who wants to employ a 60-year old man?”; “56 years old, in which job could I start?”;  
“I am too old and too expensive”;  
“I do understand that they want sick people to get back to work, but at a certain age”.

**9. Low educational level**

“Nobody wants to employ me because I still have much to learn”;  
“My employer doesn’t want me without an adequate educational level”;  
“I can’t apply for a job without higher education”;  
“That’s just the problem, to accept the own limitations.

**10. Poor coping style**

“I find it very difficult to perform another kind of work”;  
“First of all, you have to accept that you are not longer able to perform the same kind of work that you would prefer”.

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**11. Character style**

Individual psychological assets

“I can’t start in a new job, I am afraid to be disappointed again”;  
” I just can’t cope with a different job. I can’t stand being obliged to do it“;  
“I can only work for myself; otherwise It would not work at all”;  
“I can’t work under supervision of somebody else”.

**12. Environmental factors/societal**

“There is no modified work””; “Chronic work disabled patients miss personal guidance”;  
“The authorities don’t work together to solve the patients’ problems”; “The reintegration process takes too long time”;  
“I did not get the assistance of a vocational rehabilitation counsellor”;  
“After 1.5 years there is still uncertainty about my medical treatment and reintegration in work”;  
“I went to the vocational rehabilitation office, but they sent me away. They said they could do nothing to help me”;  
“The occupational doctor had no influence in the company”;  
“I could have returned to work sooner if the relationship between my employer and the occupational health services had been better”; “No assistance from physicians”;  
“My specialist advised me not to do my own work any more, but there is no modified work”;  
“Carelessness from a physician”, “Too long patient waiting lists”; “Unavailability of a medical device”.

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Categories according to the model of perpetuating factors for long-term sick leave and promoting factors for return to work model and the most important statements per category.

**Promoting factors for return to work**

Four main themes of important promoting factors for return to work were identified by the focus groups: favourable working conditions,

positive personal characteristics of the employee, the influence of the social environment, and the influence of the subject's personal economic situation.

### **Favourable working conditions**

The promoting factors mentioned were: having control over the working conditions, especially over the working hours and working tasks and the availability of modified work. An employee underscored this with the following statement: "Make a group of disabled people do modified work and let someone else keep an eye on them".

The patients on sick leave said that attitude and support from their supervisors during the sick leave period were of great importance for their return to work because of the emotional impact of this support. Support from the employer during the sick leave period was seen as a positive sign, which made employees feel welcomed back to work and could help them to remain involved with their workplace.

Patients emphasized that cooperation from the employer and good relationships at work are of crucial importance during the reintegration process with statements such as: "My boss said: I'm happy that we can make you stay..., and that gives a good feeling" (Table 3).

### **Positive personal characteristics of the employee**

Motivation to work and the coping style of the employee were identified as important success factors in job reintegration. Only some patients on long-term sick leave said that they had taken the initiative to arrange the conditions to return to work. Some patients were confident of returning to work in spite of their handicaps. One participant said he was sure that he would be able to get (modified) work and was willing to do everything possible to achieve his goal. According to the conceptual model, these promoting factors are inherent to the individual patient: attitude towards return to work, self-efficacy expectations, and illness representations (Fig. 1, box 3).

### **Influence of the social environment**

The participants emphasized the importance of good vocational rehabilitation programmes, counselling, personal guidance and support from health authorities and health professionals (Table 3).

### **Influence of personal economic situation**

This study shows that chronic work disabled people sometimes make

the choice to return to work earlier due to financial reasons, such as income reduction or loss of paid work due to disability. (See statements promoting factors, Table 3).

**Table 3 Promoting factors for return to work proposed by the chronic work disabled patients**

Category	Statements of patients
<b>1. Degree of control over working situation</b>	"I can function quite good as long as I can choose my own working times"; "I could work if I would be allowed to organize my own work" "I need work where I can make my own choices".
<b>2. Work motivation</b>	"I just have to seek for another job"; "I went on my own initiative to the vocational rehabilitation office"; "I went to the occupational doctor and I have asked for help, because I had been trying to reintegrate in work for about 2 years without success".
<b>3. Financial consequences of sick leave</b>	"I have to work because of financial reasons"; "My income level has decreased, and I don't want that, then I have to go back to work"; "I have to return to work, otherwise my salary will lower".
<b>4. Labour conditions</b>	"Give sick-listed employees the possibility to work less hours"; "If you cannot work whole days at your own level, then so much as you can at a lower level"; "To work half a day at your own tempo", "Work that can be done in less hours".
<b>5. Task contents</b>	"Modified work, office work or work as taxi driver"; "Light work where I don't need to think too much"; "Volunteer work that is not too heavy for me"; "Less stressful work"; "Other type of work"
<b>6. Working environment</b>	"I want modified work in a quiet environment"

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<b>7. Work relationships</b>	“To solve the problems with my employer”; ” It is fine that I can get back to work by my own employer, because that is safer”.
<b>8. Personal factors: coping style</b>	“First of all, you have to accept that you are not longer able to perform the same kind of work that you would prefer”
<b>9. Environmental factor/societal</b>	“Modify the sickness absence law;” “Financial aid to start my own company”; “Counseling and education to help me get a new job”; “Job reintegration according my possibilities”; “A mental coach should be available”; “To start earlier with the reintegration process”; “Place together a group of patients with disabilities and make someone supervise them”; “Give financial aid to the employer so that they become willing to re-employ older patients”; “If you feel that you’re being helped, then you are going in the right way”; “More understanding for the limitations of chronic work disabled patients”; “To stay involved with your work”.

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Categories according the model of perpetuating factors for long-term sick leave and promoting factors for return to work model and the most important statements per category.

## **Discussion**

The results of this study show that, besides sickness, non- medical factors, such as older age, the health insurance system, poor working relationships, poor degree of control over the working situation, lack of modified labour conditions, negative illness perceptions and recovery expectations, are perpetuating factors for long-term sick leave by chronic work disabled patients. Promoting factors for return to work include having influence over the working hours and working tasks, work motivation, financial consequences of sick leave, and a positive attitude and support from the employer.

For analysis of the data we used a modified framework approach, which is a more deductive form of analysis (29). However, analysis of the data was also, in part, inductive. Because a hypothesis had been specified in advance, analysis was partly deductive and was based upon a theoretical model (see Fig. 1). This allowed us to compare the factors mentioned by the patients with factors identified in the literature. We chose this approach because of its transparency, which makes it possible for the analysis and interpretations of the data to be assessed by others.

Studying the patient perspective using focus groups has enabled us to gain a better understanding of the mechanisms behind chronic work disability. The interviews took place in an informal atmosphere and our participants felt free to express themselves and exchange ideas about health issues with other group members who shared the same kind of problems without consequences or compensation. This is consistent with findings from previous studies that show that communication and exploring patients' needs are important aspects of patient-centred care (26). An important finding is that some factors, such as work-related factors, coping style and societal factors, are potentially modifiable, whereas other factors, such as older age and socio-economic status, are not. Coping style seems to be an important perpetuating factor for long-term sick leave. We found that some patients who reported fatigue, stress, and discouragement about employment had not yet accepted their disabled state and had problems dealing with their new situation (see Table 1, coping style). Accepting the state of disability is the first step to restore the balance and to succeed in a new work situation. Many participants had not yet reached this balance.

Some factors, such as poor work relationships or inadequate counselling, may cause a patient to prolong his or her sickness absence, possibly by reducing the motivation to return to work. These results correspond with previous studies that show that patients report lack of advice and guidance as barriers to return to work (30) and that not only medical factors are responsible for long-term sick leave (31, 32). The financial consequences of sick leave can act as a promoting factor for return to work in the long term. This is in line with early studies that suggest that a higher sick pay benefit is associated with more cumulative compensated work absence days (33). Analysis of the

data shows that the majority of our participants had low expectations of recovery. Previous studies have found that patients' beliefs about their illnesses are important predictors of return to work and functioning (34). In addition, patients' perceptions and beliefs about work and returning to work may be a significant hindrance for actual recovery or return to work status (31, 35).

The present study included patients with all types of diseases. Thus, all health conditions are placed on an equal footing, shifting the focus from aetiology to consequences. This non-disease-specific approach allowed us to investigate the impact of different kinds of disease on functioning. Our sample consisted of a broad range of patients, representing all categories of diagnosis, age, sex, socio-economic or educational backgrounds, and type of employment, and from all geographical regions in the country. Our participants shared as their only common characteristic the fact that they were sick listed for more than 1.5 years. The heterogeneity with respect to location and medical conditions enable us to reach data saturation and makes it possible to determine whether some general themes are consistent across these factors. The heterogeneity of the sample makes it possible to generalize the factors independent of the underlying diseases.

The perpetuating factors mentioned by the participants were not specific to any disease, job characteristic, or demographic characteristic. The chronic work disabled patients mentioned many common groups of perpetuating and promoting factors that they perceived as obstacles or facilitators for return to work. This indicates that chronically ill patients may perceive common perpetuating and promoting factors for long-term sick leave, independent of the clinical diagnosis. These findings imply that the results of the present study may also be applicable to other groups of long-term chronic work disabled patients. This is in accordance with an earlier study that showed that chronically ill patients with different diseases (rheumatoid arthritis, diabetes mellitus and hearing loss) identified many common groups of themes that they perceived to be necessary to cope at work (36). Our results provide important information about facilitators for return to work. Some of the promoting factors we identified (labour conditions, task contents, working environment, work relationships, coping style, and environmental factors/societal) are mentioned in the literature as perpetuating factors for sick leave (see Fig. 1), but not as promoting factors for return to work (see Table 3). Research on these factors could

be an interesting point for a future study.

In the present study we used a new integrated framework based on the ICF, specifically focused on the perpetuating and promoting factors for long-term sick leave, which due to its simplicity is a valuable research tool to help gain insight into the complexity of factors involved in the maintenance of long-term sick leave. During the analysis we also searched for deviations from the conceptual model. Analysis of the data using the conceptual framework showed that the only perpetuating factor for long-term sick leave included in the framework that was not mentioned by the sick-listed employees was the working environment. All other factors mentioned by the participants fitted into the framework.

Our study provides valuable information on the barriers and facilitators perceived by patients on long-term sick leave. Firstly, we used an innovative, multi-causal, integrative model to analyse the factors associated with long-term sick leave. This integrated approach from different points of view (medical, psychological, behavioural and societal) allowed us to identify some perpetuating and promoting factors of long-term sick leave that, to our knowledge, have not yet been reported in the literature. The model includes independent variables that have been shown empirically to be associated with long-term sick leave and return to work. Secondly, we highlighted the perceptions of long-term chronic work disabled patients, which give insight into the patients' views. Thirdly, the model is generalizable; it is applicable to a diverse group of patients with different health conditions.

### **Conclusion and Recommendations**

A great deal has been published about disability and return to work. However, the process of return to work from long-term sick leave is complex and remains poorly understood. The current study provides an insight into the complex phenomenon of the views of people who are chronic work disabled and who have been off work for longer than 18 months. The results show that factors other than health conditions, such as environmental factors and personal factors, may also be responsible for the maintenance of sick leave. Factors commonly identified as barriers for return to work were older age, the insurance health system and work-related factors. Important promoting factors mentioned by the patients were: having influence over the working hours and working tasks, work motivation, financial consequences for sick leave, and receiving support from the employer during sickness

absence. Chronic disabled patients on long-term sick leave find that the health insurance system, employers and vocational rehabilitation offices do not provide adequate support during their sick leave period. This implies that there is a need for policymakers to develop strategies aimed at achieving an efficient patient-friendly health insurance system. Training programmes for health professionals should emphasize the promotion of scientific knowledge about the potentially modifiable perpetuating factors for long-term sick leave, in order to enhance the quality of assessment of work-ability and promote sustained return to work for chronic work disabled patients.

Some of the perpetuating factors we identified are potentially modifiable. This means that there are opportunities to improve the situation of these patients. Health professionals should therefore focus on these potentially modifiable factors, such as perceptions about the illness, coping styles, attitudes towards work, work-related factors, and other environmental factors. Interventions aimed at modifying specific illness beliefs, particularly those related to the duration and consequences of the illness, may improve patient work-related outcomes. The challenge for health professionals is to determine which perpetuating factors are potentially modifiable and to advise on the evidence-based interventions that best fit the needs of the individual patient in order to promote return to work.

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## **Chapter 4**

# **What promotes sustained return to work of employees on long-term sick leave?**

## **Perspectives of vocational rehabilitation professionals**

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## Abstract

**Objectives:** The aim of this study was to (i) explore promoting factors for sustained return to work (RTW), according to vocational rehabilitation professionals (VRP) that are amenable to change for employees who have been on sick leave >18 months and (ii) gain insight into crucial aspects of interventions.

**Methods:** Semi-structured interviews were carried out with 23 VRP. All interviews were transcribed fully verbatim. An inductive analysis of the transcripts was performed, using a process of identifying, coding, and categorizing the primary patterns in the data.

**Results:** Key influenceable promoting factors for sustained RTW by long-term sick-listed employees include: employee-based vocational guidance; integral, effective communication between the sick-listed employee and all RTW stakeholders; personal factors; a supportive work environment; and a stimulating social environment. Crucial aspects of interventions include: gathering information and setting priorities; improving qualifications; influencing cognitions; monitoring the sick-listed employee through the rehabilitation process; offering tailor-made interventions at different stages within a personal time-bound action plan; and preparing the employee and the work environment for RTW.

**Conclusions:** Sustained RTW for long-term sick-listed employees can be achieved by focusing on the influenceable promoting factors for RTW. The use of combined interventions in a holistic approach involving the worker and his environment is considered the best way to address the multicausality of work disability and could help maximize RTW outcomes.

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## Introduction

Long-term sick leave is a major socioeconomic problem in Western countries due to the enormous financial costs for society (1). Several studies have shown the importance of the return-to-work (RTW) transition process for employees on long-term sick leave (2–4). Early research has shown that the probability of RTW decreases as the duration of sick leave lengthens (5). Achieving early job reintegration of chronic work-disabled employees is a difficult goal to accomplish due to the complexity of factors involved, and the issue needs ongoing attention.

An employee on long-term sick leave is an individual who functions in a complex context in which different factors can play a role, such as medical, personal, environmental, or work-related factors (6). These factors can either perpetuate sick leave or promote RTW (7) among employees who have been sick-listed for >1.5 years; the factors that stimulate RTW may be different from those that facilitate a sustained RTW. Some promoting factors for RTW are potentially influenceable and could offer opportunities for health professionals to improve work participation. Therefore, stimulation of these positive factors is important to facilitate work resumption of employees on long-term sick leave.

There are several important actors involved in the RTW process of a long-term sick-listed employee, such as the sick-listed employee him- or herself and the employee's family, employer, vocational rehabilitation professional (VRP), and other health professionals (eg, medical specialists, general practitioners, occupational physicians, insurance physicians). Professionals working in specialized reintegration services are, in comparison with other professionals, the most closely involved in the work rehabilitation process of long-term sick-listed employees. Early studies suggest that the effectiveness of RTW programs may be increased by including specially trained professionals to facilitate the job placement process (3). The titles of these professionals vary per country and include work rehabilitation counselors, RTW coordinators, disability prevention specialists, VRP, and case managers. For consistency sake, in this paper we refer to all these professionals as VRP. Many western countries make use of RTW interventions that include RTW coordinators, which seems to be an effective strategy for preventing workplace disability (8). VRP are thus an important source of information about factors associated with the successful RTW of employees on long-term sick leave.

In the Netherlands, VRP work at specialized vocational rehabilitation services, which are for-profit or non-profit organizations. According to the Dutch legislation, the employee and the employer are responsible for the work reintegration of sick-listed employees during the first two years of sick leave. VRP provide support to the employer in the management of RTW in case of sickness absence. Employers are free to choose the vocational rehabilitation service that best fits the specific needs of their employees. The services offer different work rehabilitation programs according to the specific needs of the sick-listed employee, including a VRP that coordinates the RTW activities such as workplace assessment, worker training, case management, outplacement, career counseling, referral to specific training and training in job applications. We selected VRP to acquire information pertaining to factors that stimulate RTW because of the important roles these professionals play in the RTW process for the long-term work-disabled.

The aim of this study was to explore promoting factors for sustained RTW of employees on sick leave from the perspective of experienced VRP specialized in the reintegration of long-term sick-listed employees. An additional aim was to gain insight into crucial aspects of interventions.

### **Methods**

For this qualitative study, semi-structured interviews using open-ended questions were conducted face-to-face with VRP working in the Netherlands.

### **Participants**

The participants were selected by purposive sampling (9) to maximize variability of perspectives and obtain information from a large range of VRP involved in the RTW process. The participants were selected from a directory of professional VRP of the Dutch Association of Work Rehabilitation Counseling. Selection criterion for the VRP consisted of having extensive placement experience with chronic work-disabled employees who had been on sick leave for >1.5 years.

### **Data collection**

Data were collected between July–August 2009 through semi-structured, individual face-to-face interviews using a topic guide. Twenty interviews were initially planned, and the inclusion of new respondents continued until data saturation was achieved. The participants were contacted via

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telephone by the interviewer and received additional written information about the research. Consent to participate was obtained from every participant prior to the interviews. Before the interviews started, the purpose of the study was clearly explained and the participants were asked to complete a demographic questionnaire. The demographic questionnaire elicited participants' gender, age, years of work experience, highest academic degree achieved, work setting, type of clients, and field of work. All participants agreed to the audio taping, with the assurance of confidentiality. The audiotapes were transcribed fully verbatim, and the interviewer listened to each interview twice and compared the audio records to the transcripts to ensure their accuracy. Shortly after the interviews took place, participants had the opportunity to check the correctness of the transcripts and provide additional comments via email. The VRP who agreed to participate acknowledged the need for and importance of the stated research objective.

### **Interview content**

The VRP were asked the following main questions: (i) "According to your experience, what are the influenceable promoting factors for sustained (>6 months) RTW by long-term sick-listed employees?" (ii) "According to your experience, which aspects of your interventions are crucial to achieve sustained RTW of long-term sick-listed employees?"

### **Interview procedure**

The interviews were conducted by a female insurance physician with extensive knowledge of reintegration of sick-listed employees and significant interviewing experience. The interviewer used techniques of paraphrasing, summarization, and clarification to gain a fuller understanding of the points made during the interviews. All interviews were audiotaped in the work settings of the VRP. Individual interviews lasted an average of 60 minutes. We developed a semi-structured, open-ended interview guide to elicit the experts' opinions on the research topics, while allowing exploration of issues that arose and free expression of views.

### **Sample**

The sample size was directed by data saturation (9), which refers to the point at which no new information is being generated or collected. We believed we had achieved data saturation prior to concluding the 20<sup>th</sup> interview but decided to conduct a few additional interviews to make sure that saturation had been achieved.

### **Data analysis**

We performed an inductive analysis of the transcripts, which is a process of identifying, coding, and categorizing the primary patterns in the data. The outcome of this type of data analysis is a set of categories developed into a framework that summarizes the raw data and elucidates key themes (10). All transcripts were electronically coded using the software MAXQDA (VERBI GmbH, Marburg, Germany).

During the content analysis, the data was carefully read several times. Themes and patterns were identified in the data and labeled in a process of open coding. The open coding included a close examination of the data, in a process of breaking down the data into categories. At the same time, similarities and differences between the categories were compared while asking critical questions about the inclusion of the data in the categories. The primary patterns and concepts that emerged from the data were categorized using a systematic, inductive identification of themes and patterns (10).

Initially, two interviews were independently coded by hand by a second author to ensure the inter-rater reliability of the coding. The two authors discussed the codes and reached a consensus regarding the codes. The initial coding frame consisted of 29 codes. As there was substantial agreement between both coders, one author completed the electronic coding of the remaining 21 interviews in MAXQDA. As extra confirmation of inter-coder reliability, two additional interviews were independently coded manually by a separate coder. The program MAXQDA was a useful tool to manage the data. The data were further analyzed following established steps developed for the analysis of qualitative data (9). Codes were compared, contrasted, refined, and grouped into higher-order themes. The data were assessed to discover obvious patterns through a process of axial coding and selective coding. Relations between themes were established and categories were organized into clusters based on similarities of meaning. Main categories, sub-categories and themes were identified. Sub-themes were identified, classified, and linked to the corresponding themes according to their content. The links between RTW interventions and influenceable promoting factors for RTW were established. The four authors reviewed all stages of coding, discussed the procedure collectively and reached a consensus regarding the final coding, categories and key themes. Special attention was given to the accuracy and relevance of the coding scheme and the emerging themes.

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## Results

In total, 40 VRP working in different branches were approached to participate in the study, and 23 VRP consented to be interviewed. Reasons for not participating were mainly lack of time or interest. The participants varied in gender, age, educational level, and professional and cultural backgrounds. Their ages ranged from 32–58 years of age. Their experience in work rehabilitation of sick-listed employees varied between 8–34 years. Of the 23, 12 VRP were women. The participants worked at 23 work rehabilitation agencies of small, medium, and large sizes, with a number of employees ranging from 4–200 located in 17 cities in different geographical regions of the Netherlands. Five main themes related to important influenceable promoting factors for sustained return to work emerged from our data.

The most important factors for sustained return to work among long-term sick-listed employees according to the VRP interviewed were: (i) employee-based vocational guidance regarding all aspects of work rehabilitation; (ii) integral and effective communication and collaboration with the sick-listed employee and other RTW stakeholders; (iii) the sick-listed employee as a promoting factor; (iv) a supportive work environment; and (v) a stimulating social environment. Main themes include sub-themes that represent the different points that emerged. Table 1 summarizes the main themes and subthemes. Each theme is illustrated with citations from the interviews, identified by age, gender, and specialization of the VRP.

**Table 1 Influenceable promoting factors-main themes and sub-themes from data**

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<b>Main themes</b>	<b>Sub themes</b>
1. Employee based vocational guidance	Matching the guidance to the individual needs of the sick-listed employee Providing individual guidance
2. Integral and effective communication between the sick-listed employee and all RTW-stakeholders	The benefits of open communication Interdisciplinary cooperation between all RTW-stakeholders Communication at the same level
3. The sick-listed employee as promoting factor	Positive personal characteristics The importance of work motivation Accepting handicaps and searching new possibilities The meaning of work
4. A supportive work environment	Characteristics of the workplace: Healthy working relationships Adequate physical work environment Stimulating financial measures to improve work participation
5. A stimulating social environment	Having a good social network Tackling social problems

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RTW=return to work

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## **Theme 1 – Employee-based vocational guidance**

VRP commented at length about the importance of optimal guidance of long-term sick-listed employees and emphasized that a thorough understanding of all aspects related to the absence of the employee is the starting point for successful work rehabilitation.

*Matching the guidance to the individual needs of the sick-listed employee.*

VRP stressed the importance to regard each client as a unique individual with specific problems and needs and not just as a client or work absentee. According to the VRP, a good match between employee–employer and the type of work is decisive for successful work rehabilitation.

A 48-year old female VRP helping blue-collar sick-listed employees return to work for >25 years expressed the importance of individual employee attention: “Sick-listed employees should get enough attention and support from employers, colleagues and VRP during the return-to-work process; sick-listed employees should not be left to their own fate, otherwise the reintegration will lead to nothing. They need expert guidance; they have to do something that interests them, something that grabs their attention. But the most important thing is that they are able to perform the work they are supposed to do.”

*The importance of gathering complete information about the sick-listed employee.*

VRP found that the more information they gathered about the client, the better they were equipped to tackle the obstacles for RTW of their clients. The participants expressed that information gathering about the client should be as complete as possible because it provides crucial information and helps to choose an adequate intervention and workplace.

A 58-year-old VRP with 32 years experience in the rehabilitation of sick-listed employees working in the maritime sector said: “Spending enough time to explore the personal situation of the sick-listed employee, including his medical, work and social situations facilitates the rehabilitation process. Identifying the real barriers and facilitators for RTW make it possible to determine priorities and the actions that need to be taken to achieve successful reintegration.”

## **Theme 2 – Integral and effective communication between the sick-listed employee and RTW-stakeholders**

According to our participants, the communication with sick-listed employees should be open, direct and clear, and the distance between VRP and employee should be as close as possible. This implies that the VRP should communicate at the same level as the employee. The participants stated that an open, honest communication is one of the best ways to build a successful relationship between the VRP and the client. It is important to communicate honestly about the expectations of the client. If the VRP thinks that the client has little chance to succeed, then he should be open about this. Clients who are actively encouraged to share their ideas feel more valued and have more confidence in the VRP, which improves the work reintegration process. According to VRP, hierarchical relationships with the client should be avoided because it interferes with the communication. Clients feel freer to talk to a VRP if he or she has their own communication style. This lack of social barriers within the client-VRP relationship and the ability to speak the same language enhances the communication and the reintegration process as well as the relationship with the client and, as a result of this, improves work reintegration. The sub-themes identified were related to the benefits of open communication, interdisciplinary cooperation between all RTW stakeholders and the relevance of communication at the same level.

### *The benefits of open communication*

Taking the problems of clients seriously, treating them respectfully and showing empathy were mentioned as important promoting factors for return to work. Besides providing support to the sick-listed employees, some VRP found that it is also necessary to promote self-responsibility and self-care. Providing a realistic understanding of the medical condition, expected recovery and implications for the work situation are important promoting factors.

The following excerpt of a 38-year old female VRP working for 15 years with low-educated sick-listed employees illustrates the importance of open communication: “Good communication includes an honest, open approach, speaking at the same level as the client and being clear about the possibilities and impossibilities in the reintegration; but this also means that there is a need to take the client seriously and to treat him respectfully. It is very important to set clear rules and explain the consequences of the choices made. This form of communication promotes client confidence in the VRP and increases the employee’s chance of returning to work.”

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*Interdisciplinary cooperation between all RTW stakeholders*

VRP stressed the importance of multidisciplinary teams who collaborate with each other, because long-term sick-listed employees often have diffuse or multiple problems that need different specialists. This differentiation is required to provide tailor-made guidance according to the specific type of employee, his or her education level, and the nature of the complaint. All stakeholders involved in the RTW of the sick-listed employee should work in the same direction and communicate effectively. It is important that healthcare professionals incorporate RTW goals and timelines into their medical advice. Professionals should work towards common agreed goals between the sick-listed employee, healthcare providers, supervisors, management and social security officers.

A 38-female VRP with 8 years experience in the private sector explained: "There is no ready plan of action for a specific type of employee. Employees should get specialized guidance according to their own problems and specific needs. Sick-listed employees often have different types of problems and all of these problems should be treated by the right person. It is necessary that all persons involved in the rehabilitation process, including clients, healthcare professionals, supervisors and work rehabilitation professionals work in the same direction and collaborate with each other; this means that they should have a common goal: to achieve early and durable return to work of the sick-listed employee."

*Communication at the same level*

In the case of employees speaking another language, it is crucial that the VRP speak the same language and be aware of the cultural background of the employee to be able to understand the views of the employee. In some specific cases, the VRP advised a home visit to the employee to obtain an impression of the private situation and to get to know the family of the employee and involve family members in the rehabilitation process. This improves the communication and the confidence of the client, especially for workers who experience intimidating obstacles in their RTW.

A 50-year old female VRP specialized in the reintegration of long-term sick-listed blue collar foreign workers with great difficulties acquiring jobs, put it this way: "These sick-listed employees not only have medical problems but they often have serious psychosocial and financial problems related to their backgrounds and difficult social situations. The VRP should enter into the world of the employee and gain her/his confidence. This is only possible if you speak the same language and are able to understand the views and

moral standards from the perspective of the sick-listed employees.”

### **Theme 3 – the long-term sick-listed employee as promoting factor**

VRP considered sick-listed employees as active partners and resources for their own rehabilitation. The respondents indicated that positive individual characteristics of the sick-listed employee, such as work motivation, positive expectations about recovery, high levels of self-efficacy, strong work ethic, flexibility, degree of acceptance of one's own sickness, healthy self-esteem, and self-confidence, are promoting factors for RTW.

A 56-year old female VRP helping sick-listed employees return to work for >25 years, explained how the employee can act as a promoting factor: "There are many potentially modifiable factors that can promote return to work. In my opinion, one of the most important factors is the sick-listed employee himself. You can use expensive and sophisticated methods to help people reintegrate to work, but if the employee is not willing to collaborate and to work hard towards his own work resumption, it will be almost impossible to succeed. One of the most crucial things is to first identify the barriers you are dealing with. If the barriers to reintegration are located in the employee (such as beliefs, feelings, customs, behavior), then you should first try to overcome these obstacles. The VRP should be well informed about the personal and work situation of his client and apply special techniques according to the specific needs and personality of the client. Some sick-listed employees are not aware of the fact that their own ideas, behavior and fears are the main obstacles that impede them to get a better life. My task is to open the eyes of my clients, make them realize that they have choices, and to make them see that they have the potential to change their own lives and improve their own future and the future of their children. Sometimes it is a difficult task, but it is very rewarding to see people change in the right direction."

#### *Work motivation is half the work*

Our participants agreed that work motivation and having a positive attitude towards work are some of the most important factors in returning to work. Motivated sick-listed employees have proactive attitudes and explore by themselves the possibilities of returning to work and work towards their goals of work resumption.

A 48-year old female VRP with 17 years experience with sick-listed bank employees noted: "Motivation is undoubtedly a crucial factor. It truly makes a difference if the sick-listed employee is self-motivated to return

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to work or if he is motivated by his family, peers or colleagues. It is indispensable that a person has a healthy work ethic and that he really wants to work. A motivated employee is half the work, and then you should motivate the employer to give him a chance despite his sickness and his older age.”

#### *Accepting handicaps, searching for new possibilities*

Most of our participants stressed the importance of employee acceptance of the new situation after disease or injury before starting a new job. Long-term sick-listed employees need first to accept their own handicaps and disabilities to be able to function in a new work environment.

An experienced 52-year-old female VRP who has been working for 22 years with long-term sick-listed teachers and office workers stressed the importance of flexibility and the acceptance of a client's own disabilities: “The first thing to do is to make it clear to the sick-listed employee that there is no way back and that there is only a way forward and that is the reintegration path. Being able to accept changes in occupational activities, to adapt to disease-related impairments and be flexible makes reintegration easier. People who adapt easily in a new work environment, with new colleagues and doing new tasks, can better reintegrate into a new job than people who still hope to get their own job back.”

#### *The meaning of work*

VRP found that having positive ideas about the role of work can influence the reintegration process. Work can help achieve results, improve personal identity and boost self-esteem. Sick-listed clients who give great significance to work reintegrate more easily than those who do not.

A 45-year old male VRP working for 20 years with long-term sick-listed blue- and white-collar employees highlighted the importance of the meaning of work in this way: “Work is far more than a job. Of course you need a job to pay your expenses, but work is above all an activity through which a person fits into society and enables one to grow, learn and develop a sense of identity and worth. The first step of reintegration is to make sick-listed employees discover this kind of value by themselves. If the sick-listed employee is able to look at work in this way, then the reintegration will become much easier.”

## **Theme 4 – a supportive work environment**

Positive characteristics of the work environment such as type of job, size of the enterprise, distance to the workplace, good social and physical environment and the availability of financial incentives were considered promoting factors for RTW.

### *Workplace characteristics*

Working in large companies (>50 employees) and in sectors with more work opportunities make it possible that employees can be easily placed in modified work and that more work is available for sick-listed employees. A short distance to the workplace contributes to early RTW; a long distance to work is an extra barrier to surpass.

### *The benefits of healthy working relationships*

VRP stressed the importance of positive attitudes of employers toward people with disabilities in the workplace. Having high social support from supervisors and co-workers was mentioned as an important promoting factor for RTW.

A 48-year-old female VRP with 15 years experience with low-educated employees in the production sector said: “The roles of the employer and co-workers are of great importance during the reintegration process. They have to accept the disabled worker; the way in which the employer treats the sick-listed employee can be decisive for the reintegration. There has to be a good match between them to make reintegration succeed.”

### *Providing an adequate physical work environment*

The importance of having modified work, availability of workplace accommodations, ergonomic workstations, modified work schedules, transitional duty, alternative duty and having control over work and rest periods were stressed by the participants.

A 43-year-old female VRP with 15 years experience in the industry sector stressed: “Sick-listed employees depend completely on the availability of work accommodations in the workplace. The better the workplace fits the needs of the employee, the sooner he will return to work. Sometimes there are no possibilities to provide modified work, especially in small companies; the government should reserve modified workplaces for the work-disabled.”

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#### *Stimulating financial measures to improve work participation*

Financial measures that minimize the financial risks for employers who employ chronic work disabled are very important to promote RTW. Financial incentives for the employee were also mentioned by the participants, such as providing financial bonuses for sick-listed employees who succeed to return to work earlier. An experienced 48-year-old VRP who works with middle-low educated sick-listed employees with chronic musculoskeletal disorders said: "Providing financial security is important because most employers are not willing to employ the work-disabled without receiving financial incentives. Bonuses for employers who hire more work-disabled employees could help overcome financial obstacles. Providing bonuses to sick-listed employees who return earlier to work could also be an important incentive, because the financial aspect plays a more important role than you can imagine."

### **Theme 5 – relevance of a stimulating social environment**

Social environmental factors are related to the beneficial effects of having access to good social network, motivating personal contacts and positive role models in the social environment of the employee (eg, family members, friends and neighbours) that can influence positively and encourage the worker to resume work. Having a stable social situation was also mentioned as a promoting factor. Social contacts of the sick-listed employee should be aware of the possibilities to return to work so that they can advice or help the employee in some way. Employers and social security organizations that provide support and advice during the reintegration process were also mentioned as important promoting factors.

#### *Tackling social problems*

A 47-year-old female VRP with 18 years experience in the private sector noted: "Long-term sick-listed clients often have similar backgrounds, including complex social problems. This point should not be forgotten during the reintegration process. Sick-listed employees should, in the first place, be provided with measures to alleviate their non-medical problems, such as solutions concerning how to cope with family issues or financial problems. From that starting position, it is easier to achieve sustained RTW. Solving or reducing social problems of the sick-listed employee help achieve reintegration because it brings an inner calm that can help the employee concentrate on the reintegration. Reintegration fails often just because of unsolved social problems."

### **Crucial components of RTW interventions used by rehabilitation counselors**

The second main question in this study was: “what are the crucial aspects of RTW interventions used by VRP to reintegrate long-term sick-listed employees?”

Table 2 summarizes the key findings.

### **Table 2 Crucial components of return-to-work (RTW) interventions according to vocational rehabilitation professionals**

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#### **Crucial components of RTW interventions**

1. Gathering complete information and setting priorities.
  2. Improving qualifications.
  3. Influencing cognitions.
  4. Monitoring the sick-listed employee through the rehabilitation process and after RTW.
  5. Offering tailor-made interventions at different stages within a personal time-bound action plan.
  6. Preparing the sick-listed employee and the work environment for RTW.
- 

#### *Gathering complete information and setting priorities.*

Gathering as complete as possible information about the client is crucial, because it provides valuable information that helps to analyze the burden of the client, set priorities of actions, and choose an adequate intervention and workplace.

An experienced 58-year old male VRP with 35 years experience in the ship industry stressed the importance of information gathering and priority setting before choosing a strategy: “A client is sitting in front of you, you explore the situation thoroughly and analyze it deeply; which obstacles impede the client to resume work? Are there other problems besides disease? If the person has serious private problems, then you should first help him to solve or alleviate these issues. Due to the great impact of these private issues on the lives of employees, it is urgent to tackle these barriers first; otherwise work rehabilitation will not succeed. Sick-listed employees facing these kinds of obstacles cannot concentrate or put

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enough effort into work; this means that you should set priorities and tackle different obstacles. This knowledge helps to choose your strategy, to decide which tools and methods best fit this individual and is decisive for successful reintegration.”

#### *Improving qualifications*

An important aspect of interventions is to improve the suitability of the employees for different occupations. To achieve this goal, clients may have to undergo re-training or follow additional courses. The VRP should investigate suitable training options according to the needs of the client. The personal qualifications of the employee in different areas (eg, competencies, knowledge, social skills, written and oral communication skills, and assertiveness should be improved) in order to increase the chances of reintegration. Training for groups of sick-listed employees who face similar obstacles can also be helpful because it stimulates social interactions and social networking within the group's members.

#### *Influencing cognitions*

VRP stressed the importance of influencing cognitions, negative emotions, and negative RTW expectations by long-term sick-listed employees in order to stimulate reintegration.

A 51-year old male VRP with 15 years experience in the work reintegration of workers in the administrative sector said: “Some barriers are not as obvious as others. Many employees on long-term sick leave not only suffer from medical diseases, but also have a lack of self-confidence and feelings of fear, anxiety, and negative work expectations, which can impede reintegration. We gradually increase the self-awareness of these clients and challenge irrational thoughts. We try to make them confident that they will be able to function in a new work situation.”

The participants mentioned that cognitive methods are important to influence behavior, motivation, acceptance of sickness and handicaps, self-responsibility, self-care, autonomy, RTW expectations, self-insight, self-confidence and self-efficacy.

A 47-year old VRP with 12 years experience in work rehabilitation of blue-collar workers stressed the importance of influencing cognitions: “Many things change in the life of a sick-listed employee after two years of sick leave, such as daily activities and social roles. People get used to a life without work in which they receive sickness benefits, experience inactivity, and take care of the household and the children; the whole family gets used to this situation. Some people even believe that they have “a balanced life”. Sometimes sick-listed employees are not willing to

change their situation, and then it is necessary to develop a sense of responsibility and positive attitude towards work. We have to make them aware of their duties in the society and make it clear to them that they need to set a good example for their children. We also invite the partners because they can also influence the behaviour of the client. To change such attitudes, you first need to change the beliefs.”

### *Monitoring the sick-listed employee through the rehabilitation process and after RTW*

Long-term sick-listed employees often face complex situations involving psychological stress, anxiety, chronic pain and need individual assistance during the reintegration. VRP should provide clients with ongoing support throughout the rehabilitation process and, after they have been re-introduced into the workplace, using on-the-job evaluations and regular follow-up. This is necessary to help monitor the client's progress after RTW to prevent sick leave. Clear communication with the employee and providing personal attention are important aspects of the interventions. Contact persons at the workplace and VRP should be easy accessible for the person who is reintegrating.

### *Offering tailor-made interventions at different stages within a personal time-bound action plan*

Long-term sick-listed employees are individuals with different backgrounds, problems and needs. Therefore, they need specific interventions according to their specific cases. Multidisciplinary teams should work synchronically to solve the problems that impede successful RTW. The participants highlighted the importance of early intervention and a time-scheduled personal plan of action with clear, achievable goals. Due to the multifactorial nature of long-term sick leave, different strategies (interventions) at different stages of the sick leave path may be needed to promote RTW. The specific situation of the individual at a specific moment in time should be leading for a right choice of the RTW-intervention. Both the sick-listed employee as the VRP should create together this plan of action and work together towards reintegration at an appropriate stage.

A 45-year old female VRP with 12 years experience in work rehabilitation of industry workers on long-term sick leave explained: “The objective is that the person stands up from his chair in order to regain structure in his life and re-activate gradually. The life of a person on long-term sick leave has become passive. We make a personal time-bound plan-of-action with achievable goals; it is important that every successful little step the person achieves motivates one to set a next step. Sometimes

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we arrange voluntary work or a stage to mobilize people, regain self-confidence, and make them feel valuable. Every client has a different background, character, medical situation and has, therefore, different needs. It is imperative to choose the right method, to select the right professional and the right time for intervention.”

#### *Preparing the sick-listed employee and the work environment for RTW*

VRP stressed the importance of preparing the workplace (work accommodations and coaching of supervisors and colleagues) and the sick-listed employee for the reintegration. Sick-listed employees should visit the new workplace in advance and be aware of the work situation before they start reintegration. Employers and co-workers should be informed about how to cope with the handicap of the sick-listed employee and should be involved in the reintegration process of the colleague. VRP should have frequent contact with the employee during reintegration, monitor and anticipate problems at work, and help the employee through the transition process.

A 47-year old female VRP working for 16 years with blue-collar sick-listed employees explained: “Many supervisors and colleagues don’t know how to handle reintegrated sick-listed employees. Sometimes they don’t know how to work together with a colleague who is missing one arm, who suffers physical impairments, mental disorders or is a cancer survivor. We inform (with permission of the employee) those present in the workplace environment about the problems of the sick-listed employee, and the best ways to cope with the disabilities of the sick-listed employee. Most employers and co-workers appreciate this information. The supervisor plays a crucial role; he has to give a good example and arrange work accommodations.”

#### **Relationship between RTW interventions and influenceable promoting factors for RTW**

Further analysis of the data shows that the promoting factors for RTW have common aspects with the crucial aspects of the RTW-interventions mentioned by the VRP. Some RTW-interventions can be linked to more than one promoting factor. Table 3 shows the links between the crucial aspects of RTW-interventions and the influenceable promoting factors for RTW.

**Table 3 Relation between return-to-work (RTW) interventions and influenceable promoting factor for RTW**


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<b>RTW intervention</b>	<b>Promoting factor</b>
Gathering complete information and setting priorities	Employee-based vocational guidance
Improving qualifications	Employee-based vocational guidance
Influencing cognitions	The sick-listed employee as promoting factor
	A stimulating social environment
	A supportive work environment
Monitoring the sick-listed employee through the rehabilitation process and after RTW	Integral and effective communication between the sick-listed employee and all RTW-stakeholders
	A supportive work environment
Offering tailor-made interventions at different stages within a personal time-bound action plan	Integral and effective communication between the sick-listed employee and all RTW stakeholders
	A supportive work environment
	A stimulating social environment
Preparing the sick-listed employee and the work environment for RTW	Integral and effective communication between the sick-listed employee and all RTW-stakeholders
	A supportive work environment
	A stimulating social environment

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## **Discussion**

### **Summary of main findings**

In the opinion of experienced VRP, the following factors can stimulate sustained RTW of long-term sick-listed employees: (i) employee-based vocational guidance; (ii) integral and effective communication and collaboration with the employee and other RTW stakeholders; (iii) positive personal characteristics of the sick-listed employee; (iv) supportive work environment; and (v) a stimulating social environment.

VRP find that crucial aspects of RTW interventions are: (i) gathering complete information and setting priorities; (ii) improving qualifications, (iii) influencing cognitions; (iv) monitoring the sick-listed employee during the rehabilitation process; (v) offering tailor-made interventions at different stages within a personal time-bound action plan; and (vi) preparing the employee and the work environment for RTW. The data analysis showed that there is a link between RTW interventions and the promoting factors. Some crucial aspects of interventions (eg, monitoring the sick-listed employee, offering interventions, and preparing the employee for RTW) have common points with more than one promoting factors (table 3).

### **Methodological considerations**

To our knowledge, there are no qualitative studies concerning influenceable promoting factors for sustained RTW and interventions targeted at long-term (>1.5 years) sick-listed employees. Most studies have focused on factors and interventions for employees who are on sick leave for <6 weeks, and crucial information about promoting factors of specific chronic diseases and interventions used in this group of clients is still lacking (11, 12). This study focuses on potentially influenceable factors that stimulate the RTW process. Early studies show that a number of variables that are amenable to change such as beliefs and recovery expectations (13, 14), motivation (15), and self-esteem (16) of the sick-listed employee are useful in predicting work outcomes for these workers.

In this study, we use the definition “sustained RTW”, which is a standard used by the Dutch Workers Insurance Authority for the registration of RTW outcomes of sick-listed employees. According to this definition, sustained RTW means work resumption that lasts  $\geq 6$  months. We asked the respondents to think about clients who were off work and what they would do to help them initiate a return to the workplace and sustain it

once a re-entry was made. Our respondents mentioned that sustained RTW was their goal and that they followed the clients for 6 months after re-entry into the workplace.

The inductive method that we used in this qualitative study allowed us to explore emerging topics from the perspective of professionals specialized in work rehabilitation of employees on long-term sick leave, and this enabled us to gain valuable insights into the VRP perspective on RTW. VRP are the RTW stakeholders who have the closest contact with long-term sick-listed employees, in contrast to other health professionals, who (often) see the client briefly; these VRP, therefore, are useful sources of information pertaining to factors that promote RTW.

This study represents the views of VRP working in the Netherlands. Our participants have many years experience in the work reintegration of employees on sick leave and are experts in this field. To minimize the risk for socially desirable answers, we used a semi-structured, open-ended interview guide carefully elaborated to elicit the opinions of the participants. The interviewer used direct, clear questions and specific interview techniques. All the questions were worded as clearly and concisely as possible to avoid ambiguity. This uniformity of questions ensured that each participant responded with the same response set. The recruitment of participants continued until data saturation was reached.

The interviewer was an insurance physician with extensive experience in interviewing employees on long-term sick leave and with specific knowledge on factors related to sick leave. Insurance physicians are medical professionals specialized in the assessment of the work ability of employees on sick leave and have specific knowledge of this field.

The strength of this study is that we explored the breadth of perspectives among our participants, who were selected by purposive sampling to provide as wide a range of experiences as possible. We interviewed a sufficient number of respondents to achieve data saturation. Our sample included VRP specialized in the placement of all types employees from different working sectors, company sizes, educational levels, and different physical and/or mental diseases. For this reason, our findings may capture the perspectives of most types of rehabilitation VRP in the Netherlands.

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### **Interpreting our findings**

Several findings of the present study are credible in light of previous research. For instance, our participants expressed that effective communication with the client is the cornerstone of successful work rehabilitation. This is in accordance with the assumption that a close interpersonal client-VRP relationship is the key context for vocational rehabilitation interventions (17). Early studies have also shown that effective communication can improve adherence to treatment and disease outcomes (18, 19). Communication with the client in the same language was also mentioned by the participants as a promoting factor. This is in concordance with the finding that language and culture-concordance enhances the doctor-patient relationship (20) and that communication problems can obstruct the rehabilitation process (21). According to the VRP, all actors and actions involved in the RTW-process should be centered on and involve the long-term sick-listed employee. Previous studies have also shown the importance of patient centeredness (22, 23) and shared decision-making (24). Other studies have also shown that individualized attention and good relationships with the employee are RTW facilitators (25).

Our participants stressed the importance of considering the individual in his/her own context (ie, special consideration should be given to the overall situation of the client and not just to his/her medical problems). This is in accordance with the holistic perspective of the International Classification of Functioning, Disability and Health (ICF), in which the individual and his context are taken into account (6).

The results of this study show that non-medical factors play an important role in long-term sick leave and reaffirmed the complexity of the RTW-process. This is in line with findings from the literature that show that long-term sick leave is the result of an interaction of factors acting within the context of the sick-listed employee (6–7, 26–28). A secondary finding is that RTW interventions should simultaneously target obstacles at different levels in order to enhance work rehabilitation of long-term sick-listed employees. VRP stressed the importance of multidisciplinary teams working towards a common goal, because long-term sick-listed employees often have complex problems that need different specialists. Previous studies also indicate that multidisciplinary programs are more effective in reducing work disability than monodisciplinary programs (29–34) and have beneficial health effects by employees with chronic disabilities (35). This study shows, in accordance with previous studies, that personal characteristics of the employer such as positive attitudes towards going

back to work, and social support in the workplace (36, 37) are promoting factors for RTW. Our findings are in line with a recent study that showed that positive working conditions, supportive workplace relationships, and work satisfaction are RTW facilitators following occupational injury (38). A systematic review found evidence supporting benefits of RTW interventions including work rehabilitation professionals with shorter disability duration and lower costs (8). The role of our participants is similar to the role of other VRP in other countries such as Sweden, Finland, Norway, USA, Canada, Australia (39). These professionals coordinate the different aspects of the RTW process, facilitate and support sustained RTW, provide assistance to the sick-listed employee during the RTW process and communicate with all different RTW actors.

The data analysis showed there is a relation between RTW interventions and promoting factors for RTW. These findings are in line with the concept that individuals function within a context in which several factors play a role. Many promoting factors mentioned by our participants were also described in earlier studies on the perspectives of other RTW stakeholders. Healthcare providers stressed the importance of effective communication (19) and patient centeredness (18). Studies with patients and employment service providers showed that individualized attention to the patient (22, 23) and good relationships with the client (24) promote RTW. Employment counselors pointed out the importance of a close interpersonal client-VRP relationship in the RTW-process (18). Social insurance officers mentioned that the employer's attitude to the employee is an essential factor for successful vocational rehabilitation (40). Employees on sick leave mentioned that taking the client seriously promotes RTW (7). A previous study on the views of a wide group of stakeholders (managers, workers, occupational health professionals, VRP, etc) stressed the importance of good communication, trust and credibility among RTW stakeholders (27).

RTW is a complex matter and different stakeholders are involved in the process. The results of this study represent the views of a particular group of RTW stakeholders, namely, VRP working in the Netherlands. The literature suggests that the views of stakeholders on possible solutions to address problems can be influenced by their values and perspectives on the underlying causes of the problem (41). In general, all RTW stakeholders have the common goal of successful work resumption of employees on sick leave. However, it is important to take into account that RTW stakeholders operate in different contexts and may have

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competing objectives and different motivations (42). It could be argued that our participants could also have specific interests in the findings of this study or that they would have tried to give a better impression of their achievements. However, VRP not only mentioned their successes but also mentioned their failures in the reintegration of sick-listed employees. Furthermore, the opinions of our participants are completely anonymous and cannot be linked to specific individuals or the reintegration services where these professionals work. Our data are consistent with other studies that found that commitment of stakeholders should be stimulated to achieve successful RTW (43, 44). According to the findings in this study, our participants are important external RTW stakeholders who act as motivators for employees on long-term sick leave. VRP provide support to the employer in the management of sick leave and play an important role in supporting RTW strategies and recommending work accommodations, work restrictions, and workplace advice.

The results of this study provide valuable information about influenceable promoting factors for sustained RTW by employees on sick leave for >1.5 years. The added value of scientific knowledge about influenceable factors for RTW is the fact that they are potentially amenable to change with the use of interventions. Another important conclusion of this study is that RTW interventions should focus on different factors (eg, ones that are personal, medical and work-related) and should differ in emphasis and content depending on the time since the start of sick leave and the individual psychological characteristics of the employee (ie, tailor-made interventions). Special attention should be given to a multidisciplinary, coordinated approach between all RTW actors (eg, clinicians, occupational and insurance physicians, rehabilitation experts and supervisors).

### **Implications for future research**

This qualitative study represents the views of Dutch VRP. According to its results, influenceable promoting factors can be important in achieving sustained RTW of long-term sick-listed employees. Further research, using a different methodology would be needed to confirm these findings. It would be interesting to compare the present findings with the views of VRP in other countries. In the opinion of our participants, there are several potentially influenceable promoting factors, such as the work environment, the cognitions of the employee, the quality of guidance, the communication between sick-listed employee and other RTW stakeholders that can be useful to improve the return to work of long-term sick-listed employees. These new insights can aid health care professionals in

obtaining a better understanding of the occupational rehabilitation process and providing better advice regarding RTW. The factors identified in this study may provide a useful framework for health care professionals to communicate with long-term sick-listed clients and explore the factors associated with RTW. This framework of factors may help health care professionals to identify behavioral, social, personal and environmental promoting factors and stimulate them to improve work resumption. This implies that physicians should recognize the factors that encourage RTW and stimulate these factors among long-term sick-listed employees. Knowledge about potentially influenceable promoting factors and crucial aspects of interventions can help health professionals develop interventions that promote RTW.

### **Concluding remarks**

According to experienced VRP, influenceable work-related and personal factors (such as work environment, cognitions, and work motivation) are decisive for an employee's RTW success.

In the opinion of VRP, the use of combined interventions in a holistic approach involving the worker and his/her environment, is the best way to address the multicausality of work disability and could help maximize RTW outcomes. The results of this study have important implications for improving the work rehabilitation of clients on long-term sick leave. Healthcare professionals should be trained to identify aspects that might enable the RTW of a particular employee and to tackle the barriers that impede work reintegration. Interventions should simultaneously target the multiple problems of sick-listed employees instead of only the medical issues. Reintegration of long-term sick-listed clients is obviously a difficult task. It should be recognized that, due to the complexity of the problem, healthcare professionals alone cannot tackle the multiple obstacles for an employee's return to the workplace. Improvement of RTW outcomes requires the concerted efforts of clients and their families, healthcare professionals, healthcare authorities, employers, and insurers.

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## Chapter 4

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## **Chapter 5**

# **What factors are most relevant to the assessment of work ability of employees on long-term sick leave? The physicians' perspective**

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## **Abstract**

**Purpose:** To reach insurance physician (IPs) consensus on factors that must be taken into account in the assessment of the work ability of employees who are sick-listed for 2 years.

**Methods:** A Delphi study using online questionnaires was conducted from October 2010 to March 2011.

**Results:** One hundred and two insurance physicians reached a consensus on important factors for return to work (RTW) of employees on long-term sick leave; from those factors, the most relevant for the assessment of work ability was determined. From a total of 22 relevant factors considered for the return to work of long-term sick-listed employees, consensus was reached on nine relevant factors that need to be taken into account in the assessment of the work ability of employees on long-term sick leave. Relevant factors that support return to work are motivation, attitude towards RTW, assessment of cognitions and behaviour, vocational rehabilitation in an early stage and instruction for the sick-listed employee to cope with his disabilities. Relevant factors that hinder RTW are secondary gain from illness, negative perceptions of illness, inefficient coping style and incorrect advice of treating physicians regarding RTW.

**Conclusions:** Non-medical personal and environmental factors may either hinder or promote RTW and must be considered in the assessment of the work ability of long-term sick-listed employees. Assessment of work ability should start early during the sick leave period. These factors may be used by IPs to improve the quality of the assessment of the work ability of employees on long-term sick leave.

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## Introduction

Long-term sick leave is a recognised major health problem (1), and many industrialised countries have high percentages of people who are unproductive and who claim work disability benefits for medical reasons (2,3). Employees on sick leave need specific guidance to prevent them from being sick-listed for the long term and from requiring long-term disability benefits. The correct assessment of the sick-listed employees' ability to work is crucial to enhance the return to work; apparently, however, physicians lack sufficient knowledge about the proper assessment of workers on sick leave and the management of their return to work (4-7). For example, although management of work-related disability and absence due to illness is an essential part of the work of occupational health professionals, previous research has shown that assessing the disability, monitoring and advising during sickness absence are considered to be of low priority by occupational physicians (8). In contrast, the assessment of the ability to work was determined to be important by both employers and employees (9).

The category of physicians who evaluate patients' ability to work and who assist them in returning to work varies by country. In some countries, the assessment of the functional ability to RTW of employees on sick leave is performed by general practitioners, family physicians, occupational physicians, insurance physicians, primary care practitioners, specialists or other physicians. In the Netherlands, sick-listed employees between 18 and 65 years of age who are unable to work due to medical reasons and who meet the eligibility requirements can apply for a disability pension after a period of 1.5 years of absence due to illness. After 2 years of sick leave, employees undergo an assessment to determine their work ability, which includes an assessment of their medical condition, functional limitations, working capacity and prognosis regarding impairments, limitations on activity and ability to resume work.

Insurance physicians (IPs) are responsible for the medical assessment of the work ability of employees on sick leave in the Netherlands. These medical professionals follow a 4-year in-company training before they can be officially recognised as registered (board certified) insurance physicians. To gain insight into the factors that either impede or promote the return to work of long-term sick-listed employees, we investigated the opinions of registered insurance physicians because they specialise in the assessment of the work ability of employees on long-term sick

leave and may be regarded as experts in the field based on their specific expertise.

In this Delphi study, we refer to the assessment of work ability of employees on 2-years sick leave, according to the regulations of the Dutch legislation (10). The Work and Incomes Act 2005 has two aims: to promote reintegration and to protect the income of workers who are work disabled due to illness. The primary aim of this legislation is to promote work resumption, increasing the reintegration of employees with health-related work restrictions (10). Taking into account this legislation, the assessment of work disability should also be directed to RTW instead of focusing purely on the physical and/or mental capacity to perform work.

The available literature on RTW and sick leave has been focused mainly on the determinants of the return to work of employees on short-term sick leave, while largely ignoring the importance of the determinants of long-term sick leave. Literature shows that there is no international consensus about the definition of long-term sick leave and short-term sick leave. In the present study, we define long-term sick leave as sickness absence during at least 1.5 years. A systematic review showed that most studies on sick leave are based on sickness absence periods of 6 weeks or less, and there is much less literature about sick leave periods longer than 6 weeks (11).

The importance of early work resumption for employees on sick leave has been highlighted by several previous studies (12,13). The literature suggests that the impact of factors related to sick leave and absence from work can vary through the different stages of illness (14,15). The initial onset of absence from work is almost always due to medical reasons. Sufficient evidence suggests that both medical and non-medical factors play a role in the maintenance of sick leave (11). This diversity of factors could explain why the resumption of work is increasingly difficult as the time absent from work increases (16). Despite the importance of long-term sickness absence, previous research has shown that there is a lack of scientific knowledge on the factors associated with long-term sick leave (11).

Literature shows that the causes of long-term sick leave and complex may involve medical, psychosocial, financial, organisational and work-related factors (7). Therefore, a proper workability assessment should take into account all factors that seem responsible for the maintenance

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of the sickness absence. After 2 years of sick leave, these complex conditions require a multifactorial analysis, including the medical situation, work situation and personal situation of the claimant. This implies that the assessment of workability should include not only the medical factors, but also the non-medical factors responsible for a decreased ability to perform work. With better knowledge about the factors associated with sickness absence, IPs can make useful recommendations to achieve RTW, which is in concordance with the Dutch legislation, aiming at improving RTW outcomes. Despite the important role of physicians in the RTW process, little is known about the views of physicians on the factors that should be addressed in the evaluation of the work ability of employees on long-term sick leave. Therefore, enhancing the knowledge of physicians regarding these relevant factors is warranted.

The aim of this study was to determine the most relevant factors that should be addressed during the assessment of the work ability of sick-listed employees.

The following specific question was addressed: Which relevant factors, according to insurance physicians, should be taken into account during the assessment of the work ability of employees who are on sick leave for 2 years?

## **Methods**

We used the Delphi technique, an iterative group process of multi-round questionnaires, with the aim of gaining a consensus from a panel of experts on a particular issue (17,18).

### **Participants**

The participants were selected from the population of insurance physicians working at the Employee Benefits Insurance Authority (UWV), an organisation that employs the largest number of insurance physicians in the Netherlands. Purposive sampling was employed to recruit experienced insurance physicians from all different geographical regions within the Netherlands. The potential participants were contacted through their work email addresses. Information about the study was sent by email to all IPs working at the organisation with experience in the assessment of the work ability of employees on long-term sick leave. Subjects who were eligible for this study included registered insurance physicians with experience in the medical assessment of employees on sick leave for more than 1.5 years. The other eligibility criteria were that physicians were will-

ing to take part in four Delphi rounds and were interested in sharing their views. All potential participants who met the study criteria were invited to enrol themselves by sending an email to the researchers. Our selection criteria aimed to ensure an adequate breadth of expertise and a variety of perspectives on factors related to long-term sick leave and to ensure the availability of the selected people within the time frame of the study. Eligible subjects received written information concerning the aims and procedures of the study.

### **Procedure**

The electronic Delphi method was used to reach an agreement on factors that should be addressed during the assessment of the work ability of employees on long-term sick leave. Before starting the study, a pilot study was performed on a small group of IPs not involved in the Delphi process ( $n = 5$ ) to ensure that there was common understanding of the questions. The panellists did not know who else was participating in the Delphi study or the answers that the other panellists gave. The study comprised two preliminary rounds and two main rounds.

### **Preliminary rounds**

The aim of the two preliminary rounds of this study was to collect the input for the main rounds. The panellists achieved consensus on important factors that either hinder or promote RTW by employees on long-term sick leave. These factors were then presented to the panellists during the main rounds. A preliminary questionnaire was developed and administered to the participants via a link to the questionnaire with corresponding instructions contained in an email. We used structured questions with the "relevant/not relevant" answer format. Additionally, we asked the panellists some background questions such as gender, age and years of experience as an IP. In every round, the panellists had 2 weeks to respond, and reminders were sent out 7 days before the deadline. Data were analysed after each round to generate a list of factors for subsequent rounds. Factors that were identified by over 80 % of study participants in the preliminary rounds were resubmitted in the following rounds. This procedure allowed us to reduce the original list of factors to those that were most relevant.

### **First preliminary round**

We developed a structured questionnaire based on previous study results for the first preliminary round. The factors included in the preliminary

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rounds were compiled from three sources: 1- a systematic review of factors commonly associated with long-term sick leave (11); 2- a focus group study on the patients' perspectives on factors related to long-term sick leave (19); and 3- a qualitative study on the views of vocational rehabilitation professionals on factors that contribute to successful RTW (20). The panellists were also encouraged to add additional factors based on their clinical experience. Table 1 contains the preliminary list.

**Table 1 Preliminary list of 51 factors that either hinder or promote RTW**


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<b>Factors that promote RTW</b>	<b>Factors that hinder RTW</b>
– Motivation of sick-listed employee to RTW	– Presence of disease
– Financial consequences of sick leave	– Activity limitations
– Positive self-efficacy expectations	– Participation restrictions
– Degree of control over working situation	– Negative environmental factors
– Positive attitude of employee towards work resumption	– Older age
– Effective communication with employee	– Low educational level
– Increasing understanding of own situation	– Poor coping style
– Teaching the sick-listed employee to cope with his disabilities	– Character style
– Positive personal characteristics of the employee	– Negative Illness perceptions
– Taking employee seriously	– Negative attitude towards work resumption
– A good occupational physician	– Social influence
– Providing RTW vocational rehabilitation as soon as possible	– Negative self-efficacy expectations
– Positive social environment	– Inefficient guidance from RTW stakeholders
– Support from colleagues	– Inefficient coping style
– Influencing thoughts/behaviour	– Task contents
– Positive meaning of work	– Problematic working environment
– Financial incentives for employee	– Problematic work relationships
– Financial incentives for employer	– Adverse workplace conditions
– Communication at the same level or in the same language	– Combined workload
– Positive illness perceptions	– Impairment
– Positive workplace conditions	– Imbalanced work ability task contents
– Open communication between RTW stakeholders	– History of sickness absence
– Optimal guidance from vocational rehabilitation professionals	– Lack of social support
– Cooperation between all RTW stakeholders	
– Cooperative vocational	

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- rehabilitation by professional-social network of employee
- Improving social skills of employee
  - Encouraging sense of responsibility
  - Confronting employee with his own future
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Results based on previous study results and that were included in the first Delphi questionnaire.

### **Second preliminary round**

The second preliminary questionnaire comprised additional "new factors" (n=35) included by the panellists and that were identified in the first preliminary round. The panellists were asked the question: *Which of the following new factors mentioned by your colleagues are, according to your experience, important for RTW of long-term sick listed employees?* The respondents were asked to score each individual factor as either important or not important. As in the first preliminary round, factors selected by at least 80% of the panellists were included in the questionnaire in the first main round.

### **Main rounds**

The aim of the main rounds was to identify the factors that should be included in the assessment of the work ability of employees on long-term sick leave according to the panellists.

#### **First main round**

In this round, the panelists were asked to judge whether each of the factors included on the questionnaire were either relevant or irrelevant to the assessment of work ability according to their experience. We asked the IPs: *Which of the following factors are, in your opinion, relevant to the assessment of the workability of long-term sick listed employees?* The input for the first main round comprised a list of 51 factors that resulted from the preliminary round questionnaires. The answer format was relevant/not relevant. Only the factors mentioned by at least 80 % of the respondents and additional new factors included by individual panelists during the preliminary rounds were used to populate this questionnaire.

### **Second main round**

The aim of the last round was to identify the most relevant factors for the assessment of the work ability of employees on long-term sick leave. The factors mentioned by at least 80% of the panelists in the previous round were included in the last questionnaire. We presented the final list of twenty-two relevant factors to the panellists and asked them to select ten factors that, in their opinion, must be taken into account during the assessment of the work ability of employees who are sick-listed for 2 years. The format for this round of questions was a checkbox list. We asked the IPs: *Please select from the following relevant factors ten factors that in your opinion, definitely need to be included in the assessment of the work ability of long-term sick-listed employees.*

### **Data analysis**

#### **Preliminary rounds**

After the first preliminary round, a content analysis of the newly added factors was performed. Only new factors were included in the subsequent round.

A quantitative analysis of the responses was performed after the preliminary rounds. Data from the questionnaires were stored in SPSS 18. Incomplete questionnaires were not used. Consensus was defined as a "general agreement of a substantial majority". The following a priori criterion was used to determine the level of consensus: consensus was defined as having been achieved if 80 % or more of the panel members rated that factor as "important". Socio-demographic data were compiled after each round and analysed using descriptive statistics (e.g. frequencies, mean/median and standard-deviation).

#### **Main rounds**

A quantitative analysis of the responses was performed after the main rounds. In the first main round, consensus was defined as having been achieved if 80 % or more of the panel members rated that factor as "relevant". In the second main round, the factors selected by at least 55 % of the panellists were included in the final list of factors. These factors comprised the final list of relevant factors for the assessment of the work ability of employees on long-term sick leave.

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## **Results**

The studies were performed during a 4-month period, from November 2010 until March 2011.

### **Participants**

A total of 194 insurance physicians were initially contacted to be part of the expert panel. A total of 108 (55 %) of these IPs agreed to participate and were included in the mailing list. Eighty-six IPs did not respond to the invitation to take part of the study, giving no reason for non-participation. Only registered IPs with experience in the assessment of employees on sick leave for 2 years were included in the sample.

Of those 108 willing respondents, 107 completed the first round (99%), 105 (97%) completed the second round, 103 (95%) completed the third round and 102 (94%) completed the final round. The final round sample (n=102) included 50 women and 52 men, and their ages varied from 32 to 64 years. All included participants were registered IPs working within the Netherlands. The experience of the study participants as insurance physicians varied between 7 and 33 years.

### **Results of the preliminary rounds**

From a total of 51 factors, 32 factors were agreed upon by at least 80 % of the participants. The qualitative analysis of the new factors included by the participants generated 35 additional factors. In the second preliminary round, the 35 new factors were returned to the participants who were then asked to choose those factors that are important for RTW. More than 80 % of the panelists found 22 of the new factors important. The result of the two preliminary rounds was a list of 54 factors.

### **Results of the main rounds**

#### **First main round**

From among 54 factors, 22 relevant factors for RTW for the assessment of work ability were mentioned by at least 80 % of the participants. See Table 2 and Table 3 for factors that either hinder or promote RTW of long-term sick-listed employees.

**Table 2 Factors that hinder RTW of long-term sick-listed employees**

<b>Factors that hinder RTW</b>	<b>Percentage (%)</b>
– Inefficient coping style	91%
– Negative illness perceptions	89%
– Secondary gain from illness	89%
– Treating physicians that promote illness behaviour or advise incorrectly concerning RTW	88%
– Inefficient guidance	
o from different	86%
o RTW-stakeholders	
– Medicalising	82%
– Negative attitude from employee towards work resumption	81%
– Physicians focussing on strictly medical issues instead of paying attention to non-medical factors	80%

Based on 80% of the respondents (n=103).

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**Table 3 Factors that promote RTW of long-term sick-listed employees**

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<b>Factors that promote RTW</b>	<b>(%)</b>
– Influencing thoughts/behaviour	96%
– Positive attitude towards work resumption	94%
– Positive illness perceptions	90%
– Motivation of sick-listed employee to RTW	92%
– Effective communication with sick-listed employee	91%
– Increasing understanding of own situation	92%
– Teaching the sick-listed employee to cope with his/her disabilities	91%
– Positive personal characteristics of the employee	90%
– Avoiding conflicting advice of treating physicians	90%
– Taking employee seriously	90%
– A good occupational physician	89%
– Positive self-efficacy	88%
– Interest of treating physicians for work issues	85%
– Providing RTW-vocational rehabilitation as soon as possible	83%

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Based on to 80% of the respondents (n=103).

### **Second main round**

More than 55 % of the participants determined that nine of the 22 relevant factors should be a part of the work ability assessment of employees on sick leave. See Table 4 for the 9 relevant factors determined to be important for the assessment of work ability.

**Table 4 Factors that should be included in the assessment of the work ability of employees on long-term sick leave according insurance physicians.**

<b>Factors that promote RTW</b>	<b>(%)</b>	<b>Factors that hinder RTW</b>	<b>(%)</b>
Motivation of sick-listed employee to RTW	79%	Secondary gain from illness	76%
Positive attitude of employee towards resuming work	75%	Inefficient coping style	70%
Providing RTW vocational rehabilitation as soon as possible	70%	Incorrect advice of treating physicians regarding RTW	69%
Assessment of cognitions and behaviour	64%	Negative illness perceptions	57%
Teaching the sick-listed employee to cope with his/her disabilities	60%		

## Discussion

### Summary of main findings

Insurance physicians reached a consensus on nine relevant factors for RTW that must be taken into account in the assessment of the work ability of employees on long-term sick leave: work motivation, attitude towards RTW, changing inadequate cognitions and behaviour, early vocational rehabilitation, learning how to cope with disabilities, secondary gain from illness, negative illness perceptions, inefficient coping style and incorrect advice of treating physicians regarding RTW.

Our findings point to the importance of obtaining a complete picture of the situation of employees on long-term sick leave during the period of work ability assessment. This result implies that, in addition to an understanding of the medical condition, information about non-medical factors is

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necessary for a proper assessment of the work ability of employees on long-term sick leave. To the best of our knowledge, this is the first study that focuses on relevant factors independent of the primary diagnosis to be used in the assessment of the work ability of chronic work-disabled employees. The results of the present study may be particularly useful for physicians involved in RTW cases, and it may serve as another tool to be used in the assessment of the work ability of employees suffering from chronic conditions. The results allow us to recommend a quality improvement approach for the assessment of the work ability of employees on long-term sick leave. The identified factors could be the basis for a tool to guide physicians in the assessment of work ability of employees on long-term sick leave.

The assessment of work ability by IP's is primarily focused on the actual workability of the employee in terms of physical and/or mental capacity to perform work. The identification of the factors that maintain disability and the factors that promote work resumption contributes to make a complete investigation of the actual situation of a claimant and his ability to perform work. We believe that increasing the awareness of IP's about the relevance of these factors in their context could improve the quality of the assessment of workability of employees on long-term sick leave. The identification of factors that hinder or promote work resumption during the assessment of workability could enhance the quality of the assessment of workability. In order to facilitate insight of the IPs into the complex factors related to work disability, we used the model perpetuating factors for long-term sick leave and promoting factors for return to work to classify the factors in the Delphi study (19).

In the second preliminary round, the participants were asked to mention which factors they considered important for RTW. The IPs mentioned 22 important factors for RTW. In the first main round, IPs were asked to choose the most relevant factors for the assessment of workability from these 22 important factors for RTW. Nine important factors for RTW were mentioned as the most relevant factors for the assessment of workability.

The aim of the present study was to obtain consensus about relevant factors that should be taken into account during the assessment of workability of employees on long-term sick leave. In the last rounds of the Delphi study, the important factors for RTW mentioned by the participants were linked to the assessment of workability. Attention for factors related to RTW is consistent with the aim of the Dutch legislation, Work

and Incoming Act 2005, aiming at enhancing work participation of employees on long-term sick leave (10). Sufficient evidence shows that both medical and non-medical factors contribute to a decreased ability to perform work. Dutch IPs found that nine relevant factors should be included in the assessment of employees on long-term sick leave. With better knowledge about the factors associated with sickness absence, IPs can make a complete assessment and make useful recommendations to achieve RTW, which is in concordance with the Dutch legislation, aiming at improving RTW outcomes.

In the last main round of questionnaires, the majority of the panellists (> 55 %) mentioned that factors related to cognition and behaviour (motivation to RTW, secondary gain from illness, positive attitude towards RTW, inefficient coping style and negative illness perceptions) must be considered in the assessment of the work ability of employees on long-term sick leave. This result is consistent with previous studies on factors associated with long-term sick leave. An early study of employees on sick leave for 2 years also showed that both negative perceptions of illness and inefficient coping style hindered RTW (19). Another study on the views of vocational rehabilitation professionals found that positive cognition, work motivation and positive attitude of the sick-listed employee regarding RTW promoted work resumption of employees on long-term sick leave (20). An important finding is that the results of these previous studies show that sick-listed employees, vocational rehabilitation professionals and insurance physicians agree that motivation, inefficient coping style, negative illness perceptions and positive attitude towards work resumption are relevant factors that either promote or hinder RTW. Interestingly, three of the nine relevant factors for the assessment of work ability (secondary gain from illness, instruction for the sick-listed employee to cope with his disabilities and incorrect advice from treating physicians concerning RTW) were mentioned by insurance physicians but were not mentioned by the sick-listed employees or the vocational rehabilitation professionals as being relevant factors for RTW.

Obstacles for RTW may consist of a combined interaction between medical, psychosocial and environmental factors (19). Negative beliefs about work during a period of absence due to illness may decrease the work rehabilitation efforts and the motivation to RTW of the sick-listed employee. Negative beliefs can also elicit avoiding behaviour, such as staying sick longer than necessary, as a way of dealing with physical or psychological complaints or other psychosocial problems. Negative thoughts

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and associated behaviours may thus hinder recovery and promote further sick leave. According to the findings of the present study, we can conclude that factors related to thoughts, behaviours and environmental factors seem to play a crucial role in the development of chronic work disability and should therefore be considered during the assessment of the work ability of employees on long-term sick leave.

One remarkable finding was that functional limitations and handicaps due to disease were not mentioned by the majority of our panellists as factors that hinder RTW of employees on long-term sick leave. This result is consistent with the assumption that factors related to RTW may change over time (14) and that the development of chronicity and incapacity is often more dependent on psychosocial than on medical factors (21). This fact could explain why health status is no longer the primary factor in sick leave after 2 years, which is consistent with the observations of the current study as well.

Literature shows that some of the factors mentioned by the experts in the present study have also been mentioned in quantitative studies on factors related to sickness absence spells shorter than 1.5 years. It must be noted that most quantitative studies on these relevant factors are not focused on absence spells of 1.5 years or more. This is concordance with the findings in a systematic review on factors associated with long-term sick leave in sick-listed employees (11). Quantitative studies on the relevant factors associated with sick leave longer than 1.5 years are needed to confirm our findings.

### **Methodological considerations**

The electronic Delphi technique we used proved to be a feasible, time- and cost-efficient method. A strength of this study is that we elicited the views of a wide range of experts that covered a broad representation of views.

Although the Delphi method has been widely used in health research, studies using the Delphi technique have some variability in their methodology (22). In the present study, consensus was defined as an agreement of at least 80 % (23). In the last round, we decided that factors selected by a majority of panellists would be included in the final list and 55% can thus be accepted as a majority (24). Some authors have suggested that the use of a structured questionnaire in the first round, instead of an open-ended questionnaire, may restrict the ability of the experts to respond to the original question (25).

In the first questionnaire, we used a preliminary list of factors generated in previous studies, but we also encouraged participants to add new factors to the preliminary list. This method ensured that we did not overlook any important factors, and it allowed us to elicit 35 new factors that were incorporated in the subsequent questionnaire. Other studies have also used this pragmatic approach successfully (26,27).

This study makes a unique contribution in several ways. First, the study increased our understanding of important factors that should be considered in the assessment of the work ability of employees on long-term sick leave and that are independent of the diagnosis. Second, it covers, from the physicians' perspective, a breadth of factors associated with RTW of employees on long-term sick leave. Third, it is based on a large and heterogeneous sample of experts from all geographical regions in the country, with different demographics and varying experience with employees suffering from all types of medical complaints. Fourth, the sample reflects the characteristics of the population of IPs in the Netherlands because it was drawn from an employees' compensation organisation that covers 95 % of the working population of insurance physicians in the country. Fifth, our panellists can be regarded as experts in the field of assessment of the work ability of employees on long-term sick leave due to their specific and extensive expertise on this topic.

### **Implications for clinical practice and future research**

The results of this study suggest that after 2 years of sick leave, the focus of physicians should shift from a strictly disease-oriented approach to an individual and context-oriented approach to identify the factors that hinder recovery and encourage work resumption. Extending their focus to non-medical factors could enable physicians to target specific obstacles to work resumption and to adapt their advice to help sick workers to remain at work or to get back to work more quickly after a period of illness. The identification by health professionals of factors that hinder or promote RTW at an earlier stage of sick leave, preferably not later than the first 3 months of sick leave, and the implementation of strategies and interventions targeting these factors could help decrease the chance of developing chronic work disability.

Although we gained valuable insight into factors that are relevant for RTW that should be addressed by the assessment of work ability of long-term sick-listed employees, future studies should determine whether these factors occur frequently and whether they affect RTW outcomes. The re-

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sults represent the consensus of experts in this field and will be used to design a tool to support the medical assessment of the work ability of employees on long-term sick leave.

We expect that the results of the present study will improve the overall quality of the assessment of the work ability and subsequent guidance of sick-listed employees by emphasising the importance of taking into account non- medical factors.

The relation between thoughts and RTW is an important finding, as some factors related to thoughts and beliefs are potentially amenable to change, which offers possibilities for the improvement of work participation of employees on long-term sick leave. These findings suggest that the employees' thoughts and behaviour regarding RTW may be at least as important as the medical condition of the sick-listed employee, especially in chronic conditions.

Acknowledging and addressing factors such as lack of motivation, negative attitude towards RTW, negative illness perceptions and secondary gain issues is required to assess work ability accurately. Early RTW interventions targeting thoughts and behaviour at earlier stages of sick leave, preferably not later than after 3 months of sick leave, could also be beneficial for employees on long-term sick leave due to other types of complaints.

Specific skills training for physicians to learn to recognise these obstacles and motivators for RTW could improve the quality of guidance for employees on sick leave, for example, by providing tailor-made advice or by referring sick-listed employees to specific behavioural or mental health practitioners as needed. Promoting factors such as beginning RTW rehabilitation early, influencing thoughts/behaviour/motivation and teaching the employee to cope with his disabilities can provide excellent ways to accomplish successful vocational rehabilitation. It is interesting to note that in previous research, both patients on long-term sick leave (19) and vocational rehabilitation professionals (20) mentioned that an early start to work rehabilitation, motivation and attitude of the sick-listed employee and instruction on how to cope with disabilities were important promoting factors for RTW.

The assessment of non-medical factors could be used to select sick-listed employees who may potentially benefit from early RTW interven-

tions and may help reduce chronic work disability. Future research on early RTW- focused interventions, preferably starting not later than the first 3 months of the sick leave period and that target specific factors that hinder or promote RTW, may offer promising ways to achieve early work resumption of employees on long-term sick leave.

According to the panellists, factors related to the individual such as motivation, positive attitude towards RTW, assessment of cognitions and behaviour, an early start to vocational rehabilitation in an early stage and instruction for the sick-listed employee to cope with his disability promote RTW and should be considered in the evaluation of work ability. Barriers for RTW that also should be addressed in the assessment of work ability are inefficient coping strategies, secondary gain from illness, negative illness perceptions and inadequate advice from treating physicians. Experienced IPs agreed that non-medical barriers and factors that promote RTW should be taken into account in the assessment of the work ability of employees on long-term sick leave.

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## Chapter 5

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## **Chapter 6**

# **Implementation of an instrument to assess factors relevant for work ability assessments of employees on long term sick leave**

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Under review

## **Abstract**

**Objective:** To implement the use of a checklist with factors relevant to work ability assessments of employees on long-term sick leave.

**Subjects/design:** Two hundred Dutch Insurance physicians (IPs) were asked to participate in a nationwide implementation study.

**Methods:** A context analysis identified the barriers and promoting factors for the implementation. Then, participants were asked to assess, identify and report the factors that hinder or promote return to work (RTW) of employees on long term sick leave using the checklist during six work ability assessments in daily practice. The outcome measure was the percentage of IPs that used the checklist in at least three of the six work ability assessments. The use of the checklist was defined as the assessment of at least one of the nine factors from the checklist. A frequency analysis was performed. Official work ability assessment records were analysed to determine whether the IPs reported the assessed factors. .

**Results:** A total of 79 IPs participated in the implementation study. Almost all the IPs (96%) assessed at least one factor. High adherence rates (89%) were found. An analysis of 474 official work ability assessment records indicated that 90% of the IPs reported at least one of the factors.

**Conclusions:** The checklist seems to be a useful tool to assess barriers and facilitators for RTW of long-term sick-listed employees.

## Introduction

Long-term sick leave is a recognised socio-economic problem in most Western countries (1). The situation of people on long-term sick leave requires special attention because of the risk of developing chronic work disability and permanent dependence on disability benefits (2-6). In most Western countries, disability policy reforms have taken place to reduce disability rates (7), but the work return of employees on long-term sick leave is still a considerable problem that has negative effects on psychological well being (8) and causes personal suffering, productivity loss and high medical and rehabilitation costs. Most research on this topic has mainly focused on factors related to short- and mid-term sickness absences (i.e., shorter than 3 months), and studies about the factors associated with sick leave longer than 18 months are scarce (9). Sufficient knowledge about the factors that hinder or promote return to work (RTW) in people on long-term sick leave is important in choosing the most appropriate RTW interventions.

Work ability is a relevant concept in occupational medicine and insurance medicine. Work ability has been studied with different theoretical approaches within several disciplines and from different perspectives. According to the biomedical perspective, work ability is the result of functional capacities due to the individual's medical (physical, psychological or intellectual) condition, independent of non-medical factors (10). From a biopsychosocial point of view, work ability is the result of the interaction between medical condition, individual characteristics, work characteristics and environment (11). From a social perspective, work ability is influenced by socio-economic and political factors in the environment. Work ability has also been defined as a result of the interaction between individual and work (12). Work ability has also been defined as having the occupational competence, health and occupational abilities to perform the work tasks (13). In addition, work ability is a central concept in legislation regulating disability claims in relation to sick leave (14). This study is focused on the assessment of work ability as performed in the Netherlands by IPs according to the Dutch work legislation, which is based on the biopsychosocial approach (11).

Medical professionals play a key role in the medical assessment of long-term sick-listed employees. Reducing sickness absence and promoting the work return of employees on long term sick leave receives less attention than short-term sick leave (15). Research has shown that both

medical and non-medical factors are involved in the maintenance of long-term sickness leave (16,17). These findings imply that the physicians responsible for the assessment of the work ability of sick-listed employees should broaden the focus of the work ability assessment from a medical perspective to a broader perspective to tackle the underlying causes of the long-term sickness absences.

The assessment of the work ability of sick-listed employees is a specialised task. The type of medical professional responsible for the guidance of employees on sick leave and for the assessment of work ability varies by country, and governments employ different policies to address sickness absence. In the Netherlands, insurance physicians (IPs) are responsible for the evaluation of the work ability of employees on long term sick leave. Employees who are on sick leave for two years may apply for disability benefits according to Dutch law and have to undergo a work ability assessment to receive work disability benefits. The aim of the Work and income Act (WIA Act) is twofold; to promote reintegration and to protect the incomes of employees who are restricted in the work they can do due to illness or incapacity (18). Knowledge about factors that hinder or promote return to work can be useful for IPs to promote reintegration of employees on long term sick leave. This study is focused on the work ability assessment of employees on long-term sick leave who claim disability benefits in the Netherlands after being on sick leave for two years.

Currently, there are no suitable tools available that can be used by medical professionals in daily practice to identify the factors relevant to RTW during a work ability assessment. In a recent Delphi study, Dutch IPs reached a consensus on the most relevant factors that should be taken into account in the assessment of work ability of employees on long-term sick leave (17). According to Dutch IPs, the relevant factors that support return to work are motivation, attitude towards RTW, assessment of cognitions and behaviour, vocational rehabilitation provided from an early stage and instruction for sick-listed employees on how to cope with their disabilities. The relevant factors that hinder RTW are secondary gain from illness, negative perceptions of illness, inadequate coping strategies, and incorrect advice from treating physicians regarding RTW (17). The checklist of factors relevant to RTW was developed in an effort to provide a detailed checklist that would elicit relevant information regardless of the medical condition and could be used quickly and easily in daily practice. The content of the checklist (see appendix) was determined based on information gathered from different

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perspectives i.e. literature (9). patients on long term sick leave (15), vocational rehabilitation counsellors who assist employees on long term sick leave in their work rehabilitation (16) and insurance physicians with experience in the assessment of employees on long term sick leave (17).

Literature shows that the implementation of innovations in medical settings is a difficult task to accomplish, despite the use of adequate implementation techniques (19). Important barriers for the implementation of innovations in medical settings have been determined such as are lack of agreement with the recommendations, lack of awareness of familiarity with the innovation, attitude of the professional, lack of self-efficacy, organisational constraints, lack of time, lack of resources (20). The implementation of innovations in a medical setting is complex due to the fact that factors that hinder the implementation might operate at different levels, such as the level of the physician, the level of the patient, the level of the organisation, the social context, cultural context (21, 19). Tailor-made, phase specific implementation techniques aimed at tackling obstacles operating at the different levels are necessary for a successful implementation.

The first objective of this study was to determine the feasibility of using the checklist in the daily practice of Dutch IPs. We hypothesised that the introduction of the checklist would be feasible if at least 60% of the IPs used the checklist in work ability assessments during the implementation study. Feasibility was defined as the willingness and ability of IPs to incorporate the use of the checklist into their daily work. An additional objective of this study was to explore the factors that hinder or promote the implementation of the checklist in the daily practice of IPs.

We posed the following research questions:

1. What factors should be considered before implementing the checklist during the work ability assessment?
2. Are IPs willing and able to use the checklist during the implementation study?
3. Which barriers and facilitators to the implementation of the checklist were identified by IPs when using the checklist during the implementation study?

## Methods

### **Question 1: Factors that should be considered before the implementation**

The first research question was answered by a context analysis before the implementation study to identify the factors that might hinder or promote the implementation of the checklist and following the recommendations of researchers that emphasise the importance of understanding the context in which interventions take place to achieve a successful implementation (21,22). The objective of the context analysis was to use the input from this analysis in our implementation study to facilitate the introduction of the checklist.

The participants of the context analysis were IPs from the Dutch Employees Insurance Authority (UWV) who performed work ability assessments of employees on long term sick leave. The IPs were selected at random from a group of 102 experienced registered IPs who had participated in the Delphi research prior to the implementation study. These IPs were selected to participate in the context analysis because of their familiarity with the factors included in the checklist, due to their participation in the Delphi study. Semi-structured face-to-face interviews were performed with IPs. The interviews included questions on factors that in the opinion of the IPs could hinder or promote the implementation of the checklist. The number of interviews continued until data saturation was achieved (23). The interviews lasted 45-60 minutes and were all audio-taped.

The procedure is explained as follows. Before starting the interview, the participants received the checklist by post and were asked to read the instructions and the checklist carefully. Following Logan's model (24), the structured interviews included questions about the 1) factors related to the innovation (checklist), 2) factors related to the potential adopters of the innovation (IPs), and 3) factors related to the work environment of the potential users (IPs). The interviewees were asked to describe the expected benefits and drawbacks of using the checklist in the daily practice. The IPs were asked to comment on different aspects such as the complexity, the layout, the feasibility, the clearness and the usefulness of the checklist. The interview also included questions about the attitude, knowledge/skills of the potential adopters and the characteristics of the work environment that could influence the

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implementation of the checklist (25). The questions were open-ended and non-directive, and the answers were further explored by the interviewer (23). The participants were encouraged to express their opinions about the usefulness of the checklist and to make predictions about the acceptance by their colleagues. The information obtained during the context analysis was taken into account during the implementation study.

### **Implementation study**

The second and third research questions were answered using an implementation study to test the willingness and ability of IPs to use of the checklist in their daily practice. In addition, pre- and post-intervention questionnaires were used to study the ASE-determinants (26,27) of the IPs' intention of using the checklist. The attitude, social influences and self-efficacy model (ASE-model), is based on the theory of planned behaviour (28) and the social cognitive theory (29) and has been used in health research to explain health behaviour (30,31).

#### **Participants**

The study population was a random sample, enrolled from the population of IPs working at UWV, an organisation that employs most of the IPs in the Netherlands. The eligible subjects for this study included the entire population of IPs that perform work ability assessments of disability pension claimants who have been sick-listed for two years. IPs from all geographical regions in the Netherlands were invited to participate. In total, 220 IPs were called to participate. Participation was voluntary, and the participants did not receive any financial compensation. A sample size was calculated to ensure that we could demonstrate that 70% of the IPs used the checklist with a 95% confidence interval of 10%. (32). The calculated sample size indicated that 100 subjects had to be included in the study.

#### **Procedure**

The potential participants were contacted by email or telephone by the researchers. Prior to enrolment, the IPs received detailed written information by e-mail about the rationale and aims of the study. The IPs consented to participate by sending an e-mail to the researchers. An information packet was sent containing detailed information concerning the aim and procedure of the pilot study, written instructions, research report forms, a return envelope and the checklist for factors relevant to work return. The participants were asked to read the checklist and the instructions carefully before using the checklist. The participants were

asked to use the checklist during the normal work ability assessment of six employees on sick leave for two years. The choice of six work ability assessments was based on the fact that IPs perform on average between six to ten work ability assessments in a week. Therefore, the participants could complete the six work ability assessments in a week, and, as such, participation in the study would not be overly time consuming. The sick-listed employees were randomly selected by the IPs from the group of employees who underwent work ability assessments during the implementation study (July-December 2012).

### **Question 2: The willingness and ability of IPs to use the checklist during the implementation study.**

To answer the second research question, all work ability assessments of employees on sick leave for two years were eligible for inclusion in the study. The IPs were asked to fill in a form after completing six work ability assessments and to report the factors they assessed and identified for the sick-listed employees during the work ability assessments. The participants filled the following information in the forms: 1) whether a given factor was assessed (i.e., the IP asked questions of the sick-listed employee to determine a factor), 2) if the IP identified the factor as a signal during the work ability assessment, and 3) if the IP reported the factor in the work ability assessment report. The IPs were asked to return the filled forms and the corresponding official assessment records they made for the sick-listed employees by post to the researchers. The participants received a certificate of participation in the implementation study. No incentives were provided for participation in the implementation study.

### **Question 3: The barriers and facilitators to the implementation of the checklist**

The determinants of behavioural change, attitude, perceived social support and self-efficacy were measured by online questionnaires to answer the third question. The questionnaires were based on the ASE-model (18,19) to gain insight into the determinants for the (intention) use of the checklist by IPs.

The participants received an online questionnaire before the start of the study (T0) and after the implementation study (T1).

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The questionnaire contained questions about the following:

- Attitude of the IPs towards the use of the checklist, such as, “Do you expect to use the checklist (yes/no)?”
- Self-efficacy of IPs: Do you think you have enough knowledge and skills to use the checklist (yes/ no)?
- Social support of colleagues, manager and staff: Do you expect to receive enough support from your colleagues, staff and management to use the checklist (yes, no)?

Demographic questions were also included (gender, age and years of experience as IP). At the end of the second questionnaire, the participants were asked an open question: Do you have comments about the use of the checklist during the assessment of work ability?

### **Outcome measures**

Question 1: the factors that hinder or promote the use of the checklist and that should be considered in the implementation strategy before starting the implementation study

Question 2:

Primary outcome measure:

The primary outcome measure was the percentage of participants that used the checklist in at least three of the six work ability assessments performed during the implementation study. The use of the checklist for each workability assessment was defined as the assessment of at least one of the nine factors included in the checklist during the implementation study.

Secondary outcome measures:

The secondary outcome measures were the percentage of participants that identified at least one of the factors during the implementation study and the percentage of participants that reported at least one of the factors during the implementation study in the work ability assessment records.

Question 3: the factors that hinder or promote the use of the checklist according to the IPs that used the checklist during the implementation study

### **Data analysis**

1. Factors that should be considered before the implementation (question 1).

A content analysis was performed, using the framework of the model of Logan (33), and the data compiled during the context analysis were categorised according to this conceptual model. The model focused on the factors influencing the uptake of the innovation: the characteristics of the innovation, the potential adopters, and the practice setting or social context of the participants (33).

### 2. Willingness and ability of IPs to use of the checklist during the implementation study (question 2)

We defined the willingness and ability to use the checklist as having used the checklist in at least three of the six work ability assessments performed during the implementation study (primary outcome measure). The checklist was defined as being used when the participants assessed at least one of the nine factors included in the checklist. Statistical data analysis was performed using SPSS 19.0 to calculate the percentage of participants that used the checklist in at least three of the six work ability assessments performed during the implementation study. The frequencies for each factor and respondent characteristics were also analysed.

In addition to assessing the factors, IPs were asked to report the assessed factors in the work ability assessment records of their clients. We used the following procedure to analyse the work ability assessment records: The first author read each record accurately to determine if the IP had reported the presence of each of the nine factors for RTW in the official work ability assessment record of the sick-listed employees. Only the factors that were clearly reported in the assessment records were considered as being reported by the IP. The researcher filled a form for each case per IP, indicating which factors were reported in the work ability assessment record. All work ability assessment records were analysed by the first author. The second author analysed 10% of the cases (at random). Both researchers compared their findings. Any differences in opinions were discussed until consensus was achieved. If there were discrepancies, the two other members of the research team made the final decision.

### 3. Study of the barriers and facilitators to the implementation of the checklist (question 3)

This involved an analysis of the open question. The data from the open question in the post-intervention questionnaire was analysed using

content analysis, focusing on two main categories: barriers and facilitators related to the use of the checklist. Sub-categories were then identified within these two main categories.

## Results

### **Research question 1: What factors should be considered before implementing the checklist during the work ability assessment?**

The results of the context analysis indicated that IPs were largely supportive of the checklist. Data saturation was achieved after ten interviews.

- The factors that can promote the implementation of the checklist related to the checklist are as follows: The checklist can help to provide structure in the work ability assessment; identifying the factors in the checklist can be helpful to improve the quality of the argumentation of IPs, and the checklist can make factors easier to analyse, classify, and advise how to address the problem, which could add more value to the work ability assessment.
- The factors that can hinder the implementation of the checklist related to the checklist are follows: the extensiveness of the checklist could make it difficult to use in daily practice, and some factors are similar to each other and can be difficult to recognise.
- A factor that promotes the implementation of the checklist related to the IPs is that IPs have enough knowledge and skills to use the checklist in daily practice.
- The factors that hinder the implementation of the checklist related to the IPs as follows: negative attitude of some IPs, i.e., some experienced IPs are “entrenched in their own way of working” and are reluctant to accept innovations; perceived lack of time, i.e., most IPs find that they lack time, which could make implementation of the checklist difficult; lack of agreement with the recommendations; and customs or habits of IPs.
- The factors that promote the implementation of the checklist related to the work environment are as follows: the staff and management are expected to support the checklist, and a digital version of the checklist should be available.
- A factor that can hinder the implementation of the checklist related to the work environment is high work load.

The results of the context analysis were applied to our implementation strategy to assure an adequate introduction of the checklist (34). The recommendations of the IPs were taken into account: the checklist was summarised, the factors were presented in a more logical and functional order, and some items were clarified as much as possible before starting the implementation study, following the advice of the participants.

### **Research question 2: Are IPs willing and able to use the checklist during the implementation study?**

A total of 220 IPs were invited to participate, and 118 IPs agreed to participate. In total, 79 IPs completely participated in the implementation study. Almost all participants (96%) assessed at least one factor during the implementation study, and 97% of the IPs identified at least one factor when using the checklist during the implementation study (see table 1). The results of the implementation study indicated that 89% of the 79 participants used the checklist in at least three out of six work ability assessments.

The analysis of the 474 written work ability assessments records of the sick-listed employees performed using the checklist indicated that 90% of IPs reported at least one of the assessed factors in their final written assessments.

**Table 1: Use of the checklist by IPs and the percentage of assessed factors**

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<b>IPs</b>	<b>Frequency</b>	<b>Percentage</b>
Used the checklist in at least 3 work ability assessments	70	89%
Used the checklist in less than 3 work ability assessments	9	11%
Assessed at least one factor	76	96%
Did not assess any factor	3	4%
Identified at least one factor	77	97%
Did not identify any factor	2	3%
Reported at least one factor in the official work ability assessment records	71	90%
Did not report any factor in the official work ability assessment records	8	10%

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Identified factors and reported factors during the pilot implementation (n=79)

**Research question 3: Which barriers and facilitators to the implementation of the checklist were identified by IPs when using the checklist during the implementation study?**

A total of 79 IPs filled out the online questionnaire (n=79).

The reported facilitators to the implementation of the checklist were as follows:

- Attitude: 93% of IPs expected to use the checklist during the implementation study.

- Perceived social support in the work environment of IPs: Prior to the intervention study, 70% of IPs thought that they would receive enough support from their management to use the checklist, and 71% expected to have enough time to use the checklist. In addition, 72% of the participants thought that the staff would support the use of the checklist. After the intervention study, two-thirds of the IPs believed that they would receive enough support from their management to use the checklist, 51% expected to have enough time to use the checklist and 67% thought that the staff would support the use of the checklist.
- Self-efficacy of IPs: 94% of the baseline respondents reported they would be able to use the checklist during the implementation study, and 92% of the baseline respondents believed they had enough knowledge and skills to use the checklist.
- Positive characteristics of the innovation: Half of the IPs (51%) believed the checklist added value to the work ability assessment. The IPs reported that the checklist provides insight into obstacles for RTW, is a good frame to perform the work ability assessment and can contribute to more complete and systematic work ability assessments wherein the IPs do not forget some factors that otherwise would not be taken into account. The IPs reported that the checklist can help them assess the relevant factors for RTW more easily and provide adequate advice for tackling the obstacles for RTW.

From a total of 79 IPs who filled the online questionnaires, 59 IPs responded to the last open question in the evaluation questionnaire. The following barriers and facilitators were identified by 1 to 7 IPs during the implementation study.

Barriers to the implementation of the checklist:

- Attitude: negative attitude of IPs towards innovations (n=2), beliefs related to time constraints (n=5), negative outcome expectations (n=2) and obsolete knowledge of IPs (n=3).
- Perceived problems with the use of the checklist in practice: some participants found the checklist too extensive (n=3), and some reported a perceived lack of time (n=5).
- Lack of self-efficacy: IPs reported that they lacked the experience and/or training to use the checklist correctly (n=6). Some IPs reported finding it difficult to communicate with their clients about the barriers for RTW (n=4).

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Facilitators to the implementation of the checklist: the checklist provides insight into obstacles for RTW (n=5), is a good frame to perform the work ability assessment (n=6), and the checklist can help IPs assess the relevant factors for RTW more easily and systematically (n=7). IPs reported that using the checklist can help IPs provide adequate advice to tackle the obstacles for RTW (n=4), and IPs reported finding the use of the checklist especially useful for complex work ability assessments (n=7).

## Discussion

### Main findings

The context analysis (question 1) revealed useful factors for the implementation strategy before starting the implementation study. The barriers were the extensiveness of the checklist, perceived lack of time, negative attitude and negative beliefs of IPs towards innovations, and lack of IP motivation. The promoting factors were that the checklist provides a clear framework to structure the work ability assessment and improves the awareness and visibility of factors that would otherwise remain unnoticed.

The implementation study (question 2) indicated that IPs were willing and able to use the checklist during the implementation study. The results demonstrated high rates of adherence to using the checklist. Most IPs used the checklist correctly. The correct use of the checklist implies that IPs could assess, identify and report the relevant factors when using the checklist.

The facilitators of the implementation of the checklist were as follows: a great majority of IPs (93%) expected to use the checklist during the implementation study and to be able to use the checklist (94%). Two-thirds of the IPs believed they would receive enough support from their management to use the checklist and more than the half of IPs expected to have enough time to use the checklist and believed the checklist added value to the work ability assessment. IPs mentioned that the checklist provides insight into obstacles for RTW, is a good frame to perform the work ability assessment, can help assess the relevant factors for RTW more easily and provide adequate advice on how to tackle the obstacles for RTW.

### **Interpretation of the findings**

The implementation goal of more than 60 per cent of participants using the checklist in at least three of the six work ability assessments was achieved. This achievement indicates that the majority of participants were willing and able to use the checklist. We defined the use of the checklist for each work ability assessment as the assessment of at least one of the nine factors included in the checklist during the implementation study. It could be argued that the assessment of one of the nine factors is not sufficient to achieve a successful implementation, and that all nine factors should be assessed instead of only one of them. We believe that the assessment of one of the nine factors is sufficient to determine if the IP has used the checklist, because in practice it is unlikely that all nine factors are present in one person at a time. Furthermore, the identification of one factor by a sick listed employee implies that the IP is familiar with all nine factors included in the checklist, and that the IP suspects that one (or more) of the factors in the checklist is/are playing a role in the maintenance of sickness absence. Next, the IP decides to further investigate the factors by asking additional questions to the sick listed employee on the basis of the checklist to determine the presence of the specific factor he/she wants to investigate. This makes clear why we chose the assessment of one factor as sufficient to determine if the IP has used the checklist during the work ability assessment.

The high rates of adherence in our implementation study may be related to a sense of ownership by the IPs (35) because the checklist was developed based on the consensus of IPs and is intended to be used by IPs. Implementation research indicates that individuals vary in their willingness and speed to adopt innovations (36,37). According to the Diffusion of Innovation Theory, the adoption process shows a typical curve, including five groups adopters according to how quickly they adopt an innovation: innovators, early adopters, early majority, late majority, and laggards. Early adopters adopt the innovation very quickly. In addition, early adopters may promote the dissemination of the innovation (36). However, the speed of the adoption varies according to the innovation, the target group, opinion leaders, the implementation strategies, contextual factors, and the characteristics of the environment where the adoption takes place (34,37,38,39).

Previous research in insurance medicine has shown that participation of IPs in research is low (40). Taking into account this fact, and to facilitate participation of IPs, we decided to invite the whole population IPs (n=220)

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that perform work ability assessments of employees on long term sick leave at UWV in the Netherlands to take part of the implementation study. The response rate of 36% (79/220) is as expected. The sample showed to be heterogeneous and representative compared to the total population in terms of age, gender and work experience as IP.

In the present study, 89% of the participants used the checklist during the implementation study. These participants had a generally positive view of the tool and perceived its value in enhancing quality of the work ability assessment. An innovation has a good possibility to be successfully implemented if 20-40% of individuals adopt the innovation (36). The pattern of adoption of our checklist at over eighty per cent suggests that there are good possibilities for adoption of the checklist by the entire population of IPs.

Besides achieving a successful implementation of the checklist, it is also important to take the degree of long-term adherence, the factors involved in the maintenance of the levels of adherence (41) and sustainability of the implementation over time (42) into account. Different factors can influence the sustainability of implementations, such as contextual factors and factors related to the innovation and the users of the innovation (41-43). The sustainability of the implementation might be also influenced by interactions among factors at different levels (41,44). Therefore, it is necessary to promote sustained implementation by monitoring the course of the post-implementation period and tackling the factors that hinder the use of the checklist in practice. Future longitudinal follow-up studies of the implementation of the checklist could help determine whether the initial implementation gains remain stable over long periods of time, which factors determine the sustainability of the implementation and to develop specific strategies to maintain high adherence. For instance, long-term analysis of the official work ability assessment records and interviews with IPs could give insight into the post-implementation levels of adherence and in the factors that hinder or facilitate the sustained use of the checklist in practice. Then, tailor-made interventions, such as digital reminders, electronic records or other educational resources, could be developed to promote sustained implementation of the checklist.

Most participants were positive about the checklist. The fact that half of the IPs believed that the first version of the checklist added value to the work ability assessment indicates that a future introduction of a revised version of the checklist, adapted according the recommendations of the

participants, could be a valuable tool for work ability assessments. Our results are promising, since early implementation studies have shown that physicians do not adopt innovations easily due to lack of agreement with recommendations, because they argue the underlying evidence or because they feel that it is not clear why they should apply them (35). A minority reported it was difficult to use the checklist in their daily practice without extensive training about how to identify and report the factors. This is understandable because to be able to use the checklist correctly the IP has to first understand the difference between the factors, assess the factors during the assessment, identify the factors and then reports the factor adequately. This suggests that a well-designed future implementation programme including training, feedback and/or expert consultation can be successful in achieving IP acceptance and use of our checklist.

It appears that IPs found some factors easier to identify than others. The negative attitude of a minority of IPs appeared to be a barrier to the implementation of the checklist, which is in concordance with earlier studies that indicate that physician attitudes towards health care innovations appear to affect their implementation (19,45).

The data analysis of the records of 474 employees on long-term sick leave indicated that the factors inefficient coping style (24%), positive attitude towards RTW (24%) and motivation towards RTW (20%) were the most frequently reported in the official work ability assessment records. It would be interesting to investigate using longitudinal studies if motivation, positive attitude and inefficient coping style are really the most frequent factors associated with sickness absences longer than 18 months. It is expected that motivated sick-listed employees and sick-listed employees with a positive attitude towards RTW would return to work earlier and would not stay longer than 1.5 years on sick leave, but this does not always occur and many motivated people do stay longer than 18 months on sick leave. Literature shows that long term sickness absence has a multifactorial nature (46,47), and the work rehabilitation process of an employee on long term sick leave occurs in a complex context involving multiple factors such as medical, psychological, social, environmental factors. The complexity of the context in which a sick listed employee functions and the several factors involved in the maintenance of sickness absence, could explain why motivated sick listed employees with a positive attitude towards RTW in some cases do stay longer than 18 months on sickness absence. This is in line with early research that shows the multicausality of sickness absence and work disability (48,49)

and suggests that motivation and positive attitude towards RTW are just one of the factors involved in the maintenance of sickness absence.

To the best of our knowledge, there are currently no other checklists available that include the factors relevant to RTW for use in an assessment of work ability of all employees on long-term sickness leave longer than 18 months. The checklist in this study was developed to be used in all work ability assessments of employees on long-term sick leave, regardless of diagnosis or severity of medical condition. However, some participants expressed that the checklist could be especially useful in more complicated work ability assessments, such as when there is uncertainty about the degree of work limitations and the causes of the delay in RTW. It is not surprising that IPs find some disability assessments more complex than others, especially the cases when the subjective symptoms are stronger than the objective findings. The complexity of the work ability assessment is related to the specific situation of the sick-listed employee. For example, some employees on long-term sick leave not only suffer from different diseases (comorbidity) but may also have psychological complaints in addition to serious personal problems and problems in the work environment that may cause dysfunction and decreased work ability. The task of the IP is to take all these different factors into account during the work ability assessment. Our checklist can be helpful for systematically assessing the relevant RTW factors and gaining better insight into these factors.

Some participants mentioned that the checklist would be particularly useful during the first two years of sick leave for influencing the barriers of RTW in an early stage instead of in a later stage after two years of sick leave. This is an interesting point that needs further investigation, given that previous studies have reported that factors are phase-specific and show significant differences in the early, sub-acute and chronic phase of work disability (47-51). This suggests that the factors present at the start of the period of sickness absence may not be the same as the factors that perpetuate sickness absence after 18 months sick leave. Therefore, it may not be simply concluded that our checklist can be used at the beginning of the sickness absence without investigating first if the same factors are also present in an early stage. Future research could clarify if the perpetuating factors we found after 18 months sick leave are also present at the start of the period of sickness absence and how they vary across the sick leave period. For instance, phase specific analyses could

give more insight in changes in the strength and direction of associations during the course of the sick leave period.

One of the strengths of this study is that we employed an expert opinion-based methodology for the development of the checklist that included literature study, expert consultation and expert consensus. The users of the checklist were involved in the development of the content and in the test implementation of the checklist. Two of the members of the research team have extensive experience in the field of insurance medicine and also work as IPs. This enabled the authors to better understand the conditions under which the users would complete the checklist to determine the appropriate content and design of the checklist. Important aspects taken into account during the development of the checklist were ensuring that the checklist would not be too time-consuming and that the checklist would be feasible, practical and would not interfere too much with the daily practice of the IP. In this implementation study, we succeeded in capturing information on the factors that hinder or promote successful implementation of the checklist. We performed a context analysis prior to the implementation study and then developed an implementation strategy to ensure adequate introduction of the checklist, which permitted us to adequately tackle important obstacles to the implementation of the checklist, such as the lack of motivation and negative attitude of IPs towards the use of innovations.

### **Implications for research and practice**

This study suggests that the use of the checklist to aid in the determination and reporting of RTW-relevant factors in the daily practice of IPs is feasible, and the use of the checklist has the potential to improve the work ability assessment of employees on long-term sick leave.

However, it may be necessary to adapt the checklist to meet the needs of more of the users by, for example, developing a more practical and digital version of the checklist. The present results suggest that training and feedback on the use of the checklist for IPs are needed to be able to use the checklist correctly. The training should preferably be followed by an evaluation study. Future research should also focus on strategies that promote sustainability of the implementation.

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## Appendix

### **Checklist of factors relevant to return to work (RTW) A checklist for use in the identification of factors liable to promote or inhibit RTW of long-term sick-listed employees**

#### **Introduction:**

This checklist is intended to help insurance physicians making work ability assessments to identify and record factors that are liable to promote or inhibit the RTW of long-term sick-listed employees. Information about such factors can promote evidence-based decision-making and transparent insurance-medical reporting.

A recent nationwide study of 102 insurance physicians found that 80% of them regarded consideration of the following factors as important for workforce participation and that more than 50% of the physicians regarded consideration of the factors relevant to their work ability assessments:

- Factors liable to inhibit RTW:
  1. Inefficient coping style
  2. Inability to accept limitations
  3. Negative illness perceptions
  4. Secondary gain of illness
  5. Cognitions and/or behaviour that hinder RTW
  6. Sickness behaviour-promoting attitude and/or inappropriate advice from treating physicians regarding RTW
- Factors liable to promote RTW:
  1. Positive attitude of sick-listed employee towards resuming work
  2. Motivation of sick-listed employee to RTW
  3. RTW vocational rehabilitation provided from an early stage

#### **How to use this checklist**

- The checklist of factors relevant to work reintegration lists the nine factors referred to in the introduction. A definition of each factor is provided beneath its listing.
- To establish whether a given factor is present in a particular case, you may start by posing a question. A suitable question for starting your consideration of each factor is provided in the checklist below the factor's definition. The question is designed to

help you determine the extent to which the factor is relevant to a particular client's circumstances.

- In the column to the right of the starting question are a number of statements relevant to the factor. The statements reflect the latest medical insights and knowledge concerning the factor.
- Establishing whether the statements are valid in the client's case will yield information to help you to answer the starting question.
- The observation that an inhibiting factor is present can be the starting point for specific advice aimed at its elimination or mitigation.
- The observation that a promoting factor is present facilitates the identification/reinforcement of things that promote work reintegration.
- The factors present in a given case can be identified in your evaluation, where you can also indicate how they have been reflected in your assessment.

**FACTORS LIABLE TO INHIBIT RETURN TO WORK**

<p><b>1. INEFFICIENT COPING STYLE REGARDING RTW</b></p> <p><i>(Failure to cope with limitations in a way conducive to work reintegration)</i></p> <p><b>Does the client use inefficient coping strategies that hinder RTW?</b></p>	<ul style="list-style-type: none"> <li>- Client is focused on disease/treatment, rather than on work reintegration.</li> <li>- Client does not seek social support or help with problems during work reintegration.</li> <li>- Client cannot find any suitable way of working with his/her disease.</li> <li>- Client is waiting to see what will happen, not attempting to steer events, not seeking solutions.</li> <li>- Client appears to avoid problematic situations by withdrawing from obligations/working arrangements.</li> <li>- Client is daunted by work reintegration, is preoccupied by the difficulties of reintegration, is withdrawn, is worried often, and is negative about work reintegration.</li> <li>- Client has a passive/dependent attitude where reintegration is concerned, does not take the initiative and waits for others to take the lead of his/her work reintegration.</li> <li>- Client puts responsibility for his/her work reintegration outside himself/herself.</li> </ul>
<p><b>2. INABILITY TO ACCEPT LIMITATIONS</b></p> <p><i>(Problems accepting the physical or mental limitations associated with illness or disability)</i></p> <p><b>Does the client have difficulty accepting his/her disease and the associated limitations?</b></p>	<ul style="list-style-type: none"> <li>- Client cannot cope with the problems associated with his/her disease.</li> <li>- Client hasn't learnt to live with the limitations associated with his/her disease.</li> <li>- Client has not learnt to accept the limitations associated with his/her disease.</li> <li>- Client appears not to have accepted the limitations</li> </ul>

	<p>associated with his/her disease and finds it hard to talk about (the consequences of) the disease/is resentful about what has happened.</p> <ul style="list-style-type: none"> <li>- Client does not believe him/herself able to cope with the limitations associated with his/her disease and lacks confidence in own abilities.</li> <li>- Client appears to see his/her life as dominated by his/her disease.</li> </ul>
<p><b>3. NEGATIVE ILLNESS PERCEPTIONS</b></p> <p><i>(Negative perceptions of the disease, that hinder work reintegration)</i></p> <p><b>Does the client have negative illness perceptions that hinder RTW?</b></p>	<ul style="list-style-type: none"> <li>- Client believes that his/her disease affects his/her life so much that working is impossible.</li> <li>- Client appears preoccupied with his/her disease.</li> <li>- Client does not expect treatment to yield significant improvements.</li> <li>- The disease has a negative effect on the client's mood.</li> <li>- Client believes that he/she cannot go back to work until the symptoms of his/her disease have gone.</li> <li>- Client thinks that that he/she should not go back to work because work has made his/her problems worse.</li> <li>- Client appears more focused on his/her disease/limitations than on activities that might promote RTW.</li> </ul>
<p><b>4. SECONDARY GAIN OF ILLNESS</b></p> <p><i>(Looking for the external benefits of one's present disease)</i></p> <p><b>Is RTW hindered by secondary gain of illness?</b></p>	<ul style="list-style-type: none"> <li>- There are inconsistencies in the information yielded by the examination, and there are signs that external advantages may play a role in the perpetuation of the client's problems. The limitations described by the client are not in proportion to the seriousness of his/her disease.</li> <li>- Client expects advantages in delaying RTW and consequently does not take advantage of</li> </ul>

	<p>reintegration opportunities, despite being medically able to do so.</p> <ul style="list-style-type: none"> <li>- Client is awaiting outcome of a compensation claim.</li> <li>- Client has asked the treating physician to help him/her secure an external benefit from a third party (e.g., benefit payments, disabled aids, work dispensation, disability accommodation, personal health budget, etc.).</li> </ul>
<p><b>5. COGNITION AND/OR BEHAVIOUR THAT HINDER RTW</b></p> <p><i>(Ideas/behaviour that interfere with the reintegration process)</i></p> <p><b>Is RTW hindered by work inhibiting behaviour and/or work inhibiting beliefs?</b></p>	<ul style="list-style-type: none"> <li>- Client believes that his/her health problems will worsen if he/she goes back to work.</li> <li>- Client believes that working could damage his/her health.</li> <li>- Client believes that he/she should not have to work with his/her present health problems</li> <li>- Client believes that he/she is not able to work with his/her present health problems.</li> <li>- Client believes that he/she cannot work until his/her health problems have been treated.</li> <li>- Client believes that rest is vital to his/her recovery.</li> </ul>
<p><b>6. SICKNESS BEHAVIOUR-PROMOTING ATTITUDE AND/OR INAPPROPRIATE ADVICE FROM TREATING PHYSICIANS REGARDING RTW</b></p> <p><i>(Advice from treating physicians that interferes with RTW)</i></p> <p><b>Has the client been given advice by his/her treating physicians that can hinder RTW?</b></p>	<ul style="list-style-type: none"> <li>- Client has been advised by a treating physician not to go back to work until his/her health problems have been resolved or brought under control.</li> <li>- Client has been advised by a treating physician not to resume his/her previous work.</li> <li>- Client has been advised by a treating physician not to go back to work until his/her treatment is complete.</li> <li>- Client has been advised by a treating physician to rest, without receiving further information about reactivation or work reintegration.</li> </ul>

**FACTORS LIABLE TO PROMOTE RTW**

<p><b>1. POSITIVE ATTITUDE TOWARDS RTW</b></p> <p><i>(Positive attitude towards returning to previous work or doing other work)</i></p> <p><b>Does the client have a positive attitude towards RTW?</b></p>	<ul style="list-style-type: none"> <li>- Having a job is important to the client and in the last six months, client has tried to return to work/applied for jobs/actively sought reintegration (e.g., looked for information, made contact with vocational rehabilitation counsellors, employer, occupational physician, etc.).</li> <li>- Work means much to the client (besides income), and client performs actions that are likely to facilitate reintegration (training, internships, work experience, etc.).</li> <li>- Client considers it likely that he/she can return to work, and client is reasonably positive about reintegration.</li> <li>- Client is convinced that he/she can go back to his/her old job or do other work, and client is very confident about work reintegration.</li> </ul>
<p><b>2. RTW VOCATIONAL REHABILITATION PROVIDED FROM AN EARLY STAGE</b></p> <p><i>(Reintegration activities start as soon as the client's health allows)</i></p> <p><b>Has appropriate RTW-action been taken to promote work reintegration?</b></p>	<ul style="list-style-type: none"> <li>- Reintegration programme is proceeding adequately and reintegration is in sight.</li> <li>- Client has made sufficient use of reintegration opportunities.</li> <li>- Client began seeing vocational rehabilitation counsellors at an early stage.</li> <li>- Reactivation began promptly and is making steady progress.</li> </ul>
<p><b>3. MOTIVATION OF SICK LISTED EMPLOYEE TO RTW</b></p> <p><i>(Client's behaviour, views or actions demonstrate motivation)</i></p>	<ul style="list-style-type: none"> <li>- In the last six months, client has performed actions aimed at reintegration (e.g., taken training, consulted occupational physician, vocational rehabilitation counsellors/ job coach, etc.).</li> <li>- Client is planning to go back</li> </ul>

<p><b><i>Is the client motivated about going back to work?</i></b></p>	<p>to/seek work in the coming months.</p> <ul style="list-style-type: none"> <li>- Client is ready to make concessions to return to work (accept different work, longer commuting times, accept a lower-ranking post/lower pay, etc.).</li> <li>- Client says he/she often misses work.</li> </ul>
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### References (checklist)

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# Chapter 7

## General Discussion



## General Discussion

The principal aim of this thesis is to contribute towards improvements in the work ability assessments of employees on long-term sick leave that are performed by insurance physicians in the Netherlands. The first step was to generate data on the factors associated with long-term sick leave, i.e., sick leave lasting 18-24 months.

This chapter starts with a brief report of the main findings of the studies described in this thesis, in the light of the research questions posed in the general introduction (Chapter 1). Second, issues relevant to the studies will be highlighted, and research strategies used in this thesis will be discussed. Third, the implications for the work ability assessment of IPs will be addressed. Finally, recommendations for practice and for future research are provided at the end of this chapter.

## Main findings

### ***1- What factors hinder or promote return to work by employees on long-term sick leave? (Chapter 2-5)***

Four studies were devoted to answering the first research question.

A total of 30 factors that promote return to work by employees on long-term sick leave were found and categorised as follows:

- Person-related factors (n=6): work motivation, positive self-efficacy expectations, positive attitude of employee towards return to work, positive personal characteristics of the employee, positive meaning of work and positive perceptions of illness.
- Work-related factors (n=4): degree of control over working situation, provision of vocational rehabilitation as soon as possible, support from colleagues and positive workplace conditions.
- Factors related to guidance of the employee (n=16):
  - Factors influencing the behaviour of employees on sick leave' (n=6): improving the employee's social skills, teaching the employee to cope with his or her disabilities, influencing thoughts and/or behaviour, encouraging a sense of responsibility in the employee, confronting the employee with his own future and increasing the employee's understanding of the situation.

## General Discussion

- Factors related to communication (n=7): taking the employee seriously, open communication among RTW stakeholders, effective communication with employee, communication at the same level or in the same language, optimal guidance from vocational-rehabilitation professionals, cooperation among all RTW stakeholders and cooperative vocational rehabilitation by employee's professional-social network.

-Physician-related factors (n=3): a good occupational physician, avoiding conflicting advice from treating physicians and an interest for work-related issues by treating physicians.

- Socio-economic factors (n=4): stimulating social environment, financial incentives for employee, financial incentives for employer and financial consequences of sick leave.

A total of 27 factors that hinder return to work by employees on long-term sick leave were found and categorised as follows:

- Factors related to the medical condition (n=5): presence of disease, activity limitations, impairment, participation restrictions and history of sick leave.
- Person-related factors (n=8): older age, low educational level, character style, negative illness perceptions, negative attitude of employee towards return to work, negative self-efficacy expectations, poor coping style, inefficient coping style regarding return to work.
- Work-related factors (n=5): imbalanced work ability-task contents, task contents, problematic working environment, problematic work relationships, adverse workplace conditions.
- Factors related to guidance of the employee (n=4):
  - Reintegration-related factors (n=1): Inefficient guidance from RTW stakeholders.
  - Physician-related factors (n=3): treating physicians who promote illness behaviour or advise incorrectly concerning RTW, medicalisation, physicians focusing strictly on medical issues instead of paying attention to non-medical factors
- Socio-environmental factors (n=5): lack of social support, social influence, combined workload, negative environmental factors and secondary gains from illness (Chapters 2-5).

**2- Which factors that hinder or promote return to work should be considered during the work ability assessment of employees on long-term sick leave? (Chapter 5)**

To answer the second research question, a Delphi study was performed under experienced Dutch IPs.

The factors that *promote* return to work and should be considered during the work ability assessment of employees on long-term sick leave are motivation, positive attitude towards work resumption and resumption guidance provided from an early stage.

The factors that *hinder* return to work and should be considered during the work ability assessment of employees on long-term sick leave are secondary benefits of the condition, negative perceptions of illness, inefficient coping, work-inhibiting cognitions and behaviour, absenteeism-promoting attitude and/or inappropriate resumption advice from treatment providers and the inability to accept limitations.

To bring this new knowledge into practice, we developed a checklist with definitions and examples aimed at assisting IPs in identifying nine factors that hinder or promote return to work during the work ability assessment of employees on long-term sick leave (Chapter 5).

**3-Is it feasible to implement a checklist to assess factors relevant to work ability in the daily practice of Dutch insurance physicians? (Chapter 6)**

To answer this question, a nationwide implementation study was performed for the newly developed “Checklist to assess factors relevant to work ability assessments of employees on long-term sick leave”. The results of the implementation study demonstrated that it is feasible for IPs to implement the new checklist in daily practice. The results showed good adherence (89 %), IPs were willing and able to use the checklist. Almost all IPs assessed at least one factor, 97% of the IPs identified at least one factor, and 90% of the IPs reported at least one factor when using the checklist.

## **Factors associated with long-term sick leave**

The focus of this thesis is determining factors that cause or contribute to long-term sick leave, irrespective of the underlying disease. The goal was to gather knowledge about these factors and to apply this knowledge to improve the quality of work ability assessments.

The literature about sick leave is extensive, but it is not easy to draw conclusions on causal relationships, as many studies show problems with methods involving the selection of participants and insufficient control of confounding factors (1). Many studies on prognostic factors for sick leave include populations on sick leave for less than 6 months due to specific diseases (2). More studies on factors associated with long-term sick leave are needed (3), but there is little research on factors that promote long-term sick leave (3). A recent Dutch socio-economic study found that perceived health, health-status expectations and the availability of vocational rehabilitation influence work resumption by employees on long-term on sick leave (5).

To gain insight into the factors involved in the maintenance of sick leave by employees who are already on sick leave, we described the predisposing, perpetuating and precipitating factors of long-term sick leave (6) (Chapter 2). The perpetuating factors are associated with sustained sick leave and were the focus of this thesis. The use of Spielmans' classification was innovative in work disability research and proved useful in understanding the complexity of long-term sick leave because the perpetuating factors may clarify why some people stay do not return to work after extended leave, while others with similar complaints return earlier.

Chapters 2-5 discuss the investigation of perpetuating factors from different perspectives, i.e., patients on long-term sick leave, vocational-rehabilitation counsellors who assist in work rehabilitation and insurance physicians with experience in the assessment of employees on long-term sick leave. The multiple-perspectives approach enabled us to gather a rich variety of factors by using the expertise of different stakeholders.

## **Research methods used in this thesis**

Given that previous (qualitative and quantitative) research on long-term sick leave is lacking (3), we mainly used qualitative methods to investigate the research questions posed in this thesis. The qualitative

studies in this thesis yielded valuable insight into factors affecting return to work and contribute to an understanding of the obstacles faced by employees on long-term sick leave during their return to the workplace. One of the strengths of this thesis is that methodological triangulation was applied to investigate the first research question, on approaches for gathering data and to increase confidence in the findings (7,8). We used different participants in four studies. We used consecutive literature research (Chapter 2), focus groups (Chapter 3), semi-structured interviews (Chapter 4) and a Delphi study (Chapter 5) to gather data, which added value to our findings and permitted us to obtain a broad knowledge of factors relevant to work disability. The use of different research methods in this thesis exposed 57 factors associated with long-term sick leave.(Chapter 5). 51 of these factors were included in the preliminary list. IPs mentioned 4 new factors that hinder RTW and 2 new factors that promote RTW of employees on long term sick leave. Some of these factors have already been reported in the literature in relation to short- and mid-term sick leave and return to work, but not in relation to sick leave lasting longer than 18 months. The studies included in this thesis yielded valuable data about factors associated with long-term sick leave, and these findings can be regarded as the basis for long-term disability research in the field of insurance medicine.

Qualitative research methods are especially useful when there is little previous theory or research in a certain field (7) and can be used to investigate subjects' beliefs, experiences and needs (9), however, qualitative methods also have weaknesses (10). For instance, the output from focus groups might be biased by a few participants that tend to dominate the meetings, especially given inexperienced or untrained moderators. Therefore, it is crucial to reduce the dominant role of some participants (11). The moderators in our focus groups were physicians with extensive experience in interviewing patients and had also been specifically trained to conduct focus groups. The moderators were aware of the potential pitfalls, ensured that all participants participated equally in the discussion, and encouraged all participants to generate responses based on their own experiences

The results of the focus-group research are not representative of the entire population studied. Hence, the aim of qualitative methods is not to identify a statistically representative set of respondents, but to yield detailed views of the phenomena under investigation (12). Data saturation is necessary to obtain consistent results, which ideally results

## General Discussion

in a larger number of people represented (13). In this research, the focus groups continued until data saturation was achieved. Data saturation was reached after four focus-group interviews, as was confirmed by the fifth focus group. Both the number and the type of participants are relevant to the outcomes. To obtain a range of views, the respondents should cover a wide range of ages, socio-economic classes, cultural backgrounds, etc. (12). To this end, special attention was paid to the sampling procedure, using purposive sampling to recruit the participants. All participants were on sick leave for longer than 18 months and met the eligibility requirements for a disability pension. Furthermore, adequate measures were taken to ensure that the focus groups provided a good representation of the entire population of long-term employees on sick leave in the Netherlands. The participants were selected on the basis that the focus groups should maximise the variability of perspectives and obtain information from a wide range of employees on sick leave, which could thus represent the population of employees on sick leave in the Netherlands. To ensure wide representation, we approached a heterogeneous sample of employees living in all five geographical regions of the Netherlands, with different demographics and work settings. This recruitment procedure ensured that the final sample was diverse.

Participants might find it difficult to share their feelings and ideas about personal topics in a group, however, some participants might feel encouraged to talk freely in a focus group with peers with similar problems. Moreover, focus groups can promote exchange of ideas and discussion, participants can come to reconsider their initial views through discussion with peers and gain new insight into a topic, enriching the results (14). An alternative to focus groups would have been face-to-face interviews. Interviews may have some advantages, such as privacy, which may promote communication, however, some individuals may find interviews intimidating, which may hinder communication and influence the outcome. This research focuses on the obstacles that employees on sick leave encounter over two years of sick leave, focus groups seemed adequate to elicit the views of the participants. Interaction in a group facilitates lively discussions, which can provoke unexpected reactions and reveal interesting points of view that would not be revealed by face-to-face interviews. Our participants had all been on sick leave for 2 years. We found that discussion about the obstacles they encounter could elicit richer information than individual interviews. Studying the patient's

perspective using focus groups enabled us to obtain a better understanding of the drivers of long-term sick leave. In addition, the participants were also enthusiastic about taking part in the study and found the discussions useful.

It has been suggested that the use of structured rather than open-ended questionnaires may limit the quality of the output of Delphi studies (15). Our first Delphi questionnaire started with a preliminary list of 51 factors generated in the first three studies of this thesis. To avoid restricting the panellists' answers with structured questionnaires, we encouraged participants to add new factors to the preliminary list based on their expertise. This strategy is useful in eliciting new views (16,17). The IPs added new factors, which were incorporated in the subsequent questionnaire. Some of these new factors were physician-related (i.e. treating physicians that promote illness behaviour, medicalising, physicians focussing on strictly medical issues instead of paying attention to non-medical factors) or secondary to the illness (secondary gain from illness) and had not been previously mentioned in the literature in association with long-term sick leave.

The Delphi methodology is a combination of qualitative and quantitative methods and has been used successfully in healthcare research (15-22). In contrast to focus groups, the Delphi method allows anonymous participation of respondents, avoiding social pressure and individual dominance of some participants (17). Participants in Delphi studies are experts in a field and are supposed to be able to provide "expert information". The choice of participants who act as "experts" in a Delphi study is crucial, as the method is based on the cumulative expertise of the participants (16).

Not all individuals with experience in a certain field can be considered "expert". This consideration is interesting because the experts' estimations are based on their own knowledge and expertise (17), and they determine the outcome of the study. Therefore, the experts in Delphi studies should be chosen carefully. The selection criteria are expertise, interest and closeness to the research topic (18,19). The panellists in our Delphi study were carefully selected from a pool of officially registered IPs, guaranteeing the expertise of the participants. All experts in our Delphi panel had followed an specialised in-company training program, had a mean of 15 years' experience as IPs (expertise), routinely performed work ability assessments of employees on long-term sick leave (closeness to the research topic) and were most likely motivated,

as they participated voluntarily in all Delphi rounds (interest in the research topic). Therefore, we assume that our participants can be considered “experts” and that they provided “expert information”.

### **Data sources**

Different sources were used to obtain the data for this thesis. First, the international literature was searched for information about factors associated with long-term sick leave. Stakeholders in return to work by employees on long-term sick leave include occupational physicians, general practitioners, and employers, and these stakeholders’ degree of involvement in the work reintegration varies. The choice for our participants was based on their degree of expertise in long-term sick leave. Employees on sick leave lasting longer than 18 months can be considered “field experts” and provided us with important information about the factors that hinder or promote return to work (Chapter 3). This assumption is in concordance with early research that showed that patients’ views of their sickness are valuable in improving treatment and rehabilitation (23,24).

Experienced vocational rehabilitation professionals (VRPs) who work with employees on long-term sick leave were interviewed (Chapter 4). Their close involvement with work rehabilitation and their frequent contact with employees on long-term sick leave (in contrast to other RTW stakeholders, who have only brief contact with employees on sick leave) were considered useful. The choice of four different types of sources (international literature, employees on sick leave, VRPs and IPs), seems to be sound, as it provided new, valuable knowledge about factors from complementary perspectives.

### **From new generated knowledge to practice**

The new knowledge was bundled in a tool aimed at assisting IPs in identifying factors relevant to the work ability assessment of employees on long-term sick leave. A nationwide implementation study, performed in 2012, showed that IPs were willing and able to use the checklist in daily practice (Chapter 6). One of the strengths of the implementation study was that it was performed in the real daily practice of IPs, with real work ability assessments of employees on long-term sick leave rather than simulated cases or vignette studies, as in other implementation studies (25-27). Although simulated cases promote discussion when used in

medical education (28-29), they have methodological limitations (30,31). An important advantage of performing an implementation study in real practice is that IPs could use their knowledge during the interview assessments and could report their findings on the work ability-assessment records.

The group responders had the same demographic characteristics and work experience as the IPs. Only IPs who performed work ability assessments of employees on long-term sick leave were invited to take part in the study (n=200). A total of 79 IPs completed all questionnaires. This response rate was relatively high compared to the response rates in similar implementation studies (32-34). The target group was involved in the development and the adaptation of the checklist, which might have contributed to the high response rates. In addition, we also tried to facilitate IPs' participation study by using questionnaires that were not too long or complex and did not take too much time to complete. Participants mentioned organisational constraints and time constraints as reasons for not participating in the study.

Different strategies were needed to tackle the obstacles to implementation that were identified with a context analysis, such as IPs' negative attitudes and lack of motivation and lack of support from management or staff. We wanted voluntary participation, and we made efforts to provide IPs, their management and staff with sufficient information to show them the advantages of participating in the study. For this purpose, implementation was monitored at different levels (professional, local and regional) during all implementation phases. The useful implementation activities were matched to the obstacles identified during the context analysis performed prior to the implementation study. Different strategies must be used in combination at different stages of the implementation. Strategies included sending emails with information about the aim and advantages of the study, making telephone calls to participants and staff, sending reminders at different stages, approaching key persons in the organisation and planning visits to the workplace to provide information to potential participants and staff about the study. The combined use of different strategies made it possible to achieve the implementation goal.

**Considerations concerning the “checklist of factors relevant to work ability assessments of employees on long-term sick leave“**

According to the Work and Income according to Labour Capacity Act (the WIA Act), employees can claim disability benefits after two consecutive years of sick leave (35). IPs must evaluate work ability later in the sick-leave process i.e., 18-24 months after the beginning of the sick leave. After two years, factors other than those present at the beginning of the sick leave can negatively influence work ability. Research suggests that the impact of these factors can change over time (36,37), distinct factors might be involved in the perpetuation of sick leave. Therefore, IPs must consider all different factors when assessing the work ability of employees on long-term sick leave to make a thorough evaluation.

Some non-medical factors include behavioural and psychological aspects. The assessment of non-medical factors by IPs is a complex and challenging task because IPs have medical backgrounds but are not currently trained to assess psychological factors. The checklist proposed in this thesis can help IPs perform work ability assessments more accurately and systematically, which can lead to more transparency and can help to improve the assessments. The checklist could also help to improve the uniformity and transparency of the assessments. Moreover, the identification of obstacles to return to work using the checklist can help IPs provide guidance to employees on long-term sick leave.

One of the conditions that must be met to claim disability benefits according to the Dutch work legislation is that the incapacity to perform work is “the direct and medically determinable result of disease, disorder or defect” (35). Thus, incapacity due to non-medical factors is not formally assumed to qualify the employee for disability benefits. As a consequence, the assessment of the effects of disease on the ability to work is crucial. In this sense, the new checklist can help IPs determine whether the decrease in work ability is “the direct result of disease, disorder or defect” or whether it is mainly caused by non-medical factors operating in the context of a medical condition. For instance, the checklist can be helpful in the case of medically unexplained conditions with predominantly subjective symptoms.

An important added value of the checklist is that it offers new opportunities to enhance work by employees on long-term sick leave, a population that is difficult to reintegrate because of the many barriers to return to work (38,39). Most factors in the checklist that hinder return to

work are amenable to change, such change can promote return to work, even when people are already 2 years on sick leave.

The results of this study contribute to long-term sick leave research, especially in the Dutch context. Although the factors included in the new checklist are based on a consensus of Dutch insurance physicians specialising in the assessment of employees on sick leave lasting 18-24 months, the findings can potentially be applied in an international context. The conditions that permit sick leave, however, vary over time and among nations (40). For this reason, it is important to consider the social security and work legislations of the countries when studying sick leave, as these factors can influence the application of the checklist in other socio-legal contexts.

Use of the checklist during the work ability assessment could inhibit the spontaneous communication between the IP and the employee on sick leave because the use of assessment tools might introduce a standardised communication process, however, it is expected that IPs would learn how to assess the checklist factors over several weeks. Moreover, the checklist can provide useful knowledge that IPs can use during the work ability assessment, potentially improving communication.

### **Three-step method to assess work ability of employees on long-term sick leave and results**

A systematic method to assess work ability of employees on sick leave for periods longer than 18 months is proposed based on the results of this thesis. The rationale underlying this method was described in Chapter 1. Below, the results of the studies in this thesis are presented in Figure 2 (Fig. 2).

The factors form two groups: 1) factors likely to inhibit the return to work, and 2) factors likely to promote return to work. Factors from group 1 may lead to chronic disability for people on long-term sick leave. Factors from group 2 may promote work by people on long-term sick leave.

1. Step 1 represents the work ability assessment of employees on long-term sick leave, as routinely performed by Dutch IPs (usual care). The work ability assessment is based on the ICF and encompasses the assessment of disorder/disease, functions, structures, activities, and participation. An important aspect of the work ability assessment is the interaction between the IP and the client.

2. In step 2, IPs identify factors that hinder or promote work by employees on long-term sick leave using the checklist of relevant factors.

3. In step 3, IPs advise employees on sick leave, aiming to counter the factors that hinder return to work and stimulate factors that promote return to work.

The proposed three-step method is innovative in insurance medicine because it adds two extra steps to the work ability assessment currently performed by IPs in the Netherlands. IPs are crucial because they identify the obstacles to return to work (step 2) and provide tailor-made advice to reduce the identified barriers (step 3). Step 2 has already been implemented successfully in practice (Chapter 5). Step 3 has not yet been investigated but is crucial to promoting return to work.

The three-step method could help IPs perform their tasks better and has the potential to improve work ability assessments. The ultimate goal of the 3-step method is to promote return to work by employees on long-term sick leave. The identification of barriers and facilitators through the checklist is not sufficient to improve return to work by employees on long-term sick leave. It is also necessary to take specific measures to address the identified factors. To this end, IPs need up-to-date information about effective interventions so they can provide specific, evidence-based advice to their clients. The introduction of steps 2 and 3 could improve work ability assessments of employees on long-term sick leave. Furthermore, this new method would add a new dimension to work ability assessment in insurance medicine.

Implementation research has shown that physicians are often reluctant to adopt innovations (41). It is expected that this also would be the case for the three-step method due to time and organisational constraints, which have been reported as obstacles to implementation (42). The 3-step method may be time-consuming in daily practice, especially in early implementation because IPs would have to use the checklist (step 2) and then advise their clients (step 3), however, time was not an obstacle if IPs were motivated enough to use the tool. For this reason, it is important to show the potential users (IPs) the added value of the new method to improve its acceptability. Specific implementation strategies will be needed to introduce the three-step method into the routine practice of IPs. Another viewpoint is that IPs currently do not provide advice on how to reduce obstacles and that advice should therefore not be included in the work ability assessment. This interesting viewpoint requires further elucidation. To understand the usefulness of this method, steps 2 and 3 should be linked to the four main tasks of IPs during work ability

assessments, as recommended in the general introduction section in the insurance-medicine guidelines (43).

The four main tasks of IPs according to the guidelines are listed below, followed by the application of the three-step method for each task:

1. Task 1 includes the assessment of social-medical history, including analysis of the course of the sick leave, inability to work and slow recovery from the first day of sick leave.  
Application of the three-step method in task 1: the checklist can help IPs analyse the factors associated with inability to work and slow recovery (step 2).
2. Task 2 is the assessment of the functional capacity of the employee on sick leave. This task includes an evaluation of incapacity in relation to the disease, disorder or defect. Such assessment is the main task of IPs.  
Application of the three-step method in task 2: the checklist can help IPs elucidate the degree to which the decrease in functional capacity is caused by the medical condition or by non-medical factors (step 2).
3. Task 3 comprises the evaluation of the prognosis of the employee's medical condition and functional capacity.  
Application of the three-step method in task 3 involves the following: the checklist can help IPs assess the course of the functional capacities reduced by non-medical factors. Identification of these factors and their impact can enable IPs to predict the course of recovery (step 2).
4. Task 4 includes the evaluation of the treatment received by the employee. According to the insurance-medicine guidelines, IPs should evaluate the appropriateness of the treatment received by employees on long-term sick leave. If lack of or inadequate treatment has contributed to the incapacity in recovery and work, IPs should communicate with occupational physicians or treatment physicians to determine which measures are needed to promote recovery and work by the employee on sick leave.  
Application of the three-step method to task 4 involves the following: IPs can reduce the obstacles to return to work using up-to-date information about effective interventions (step 3). IPs can apply their knowledge of factors that promote or hinder work to communicate effectively with other medical professionals and to advise evidence-based interventions.

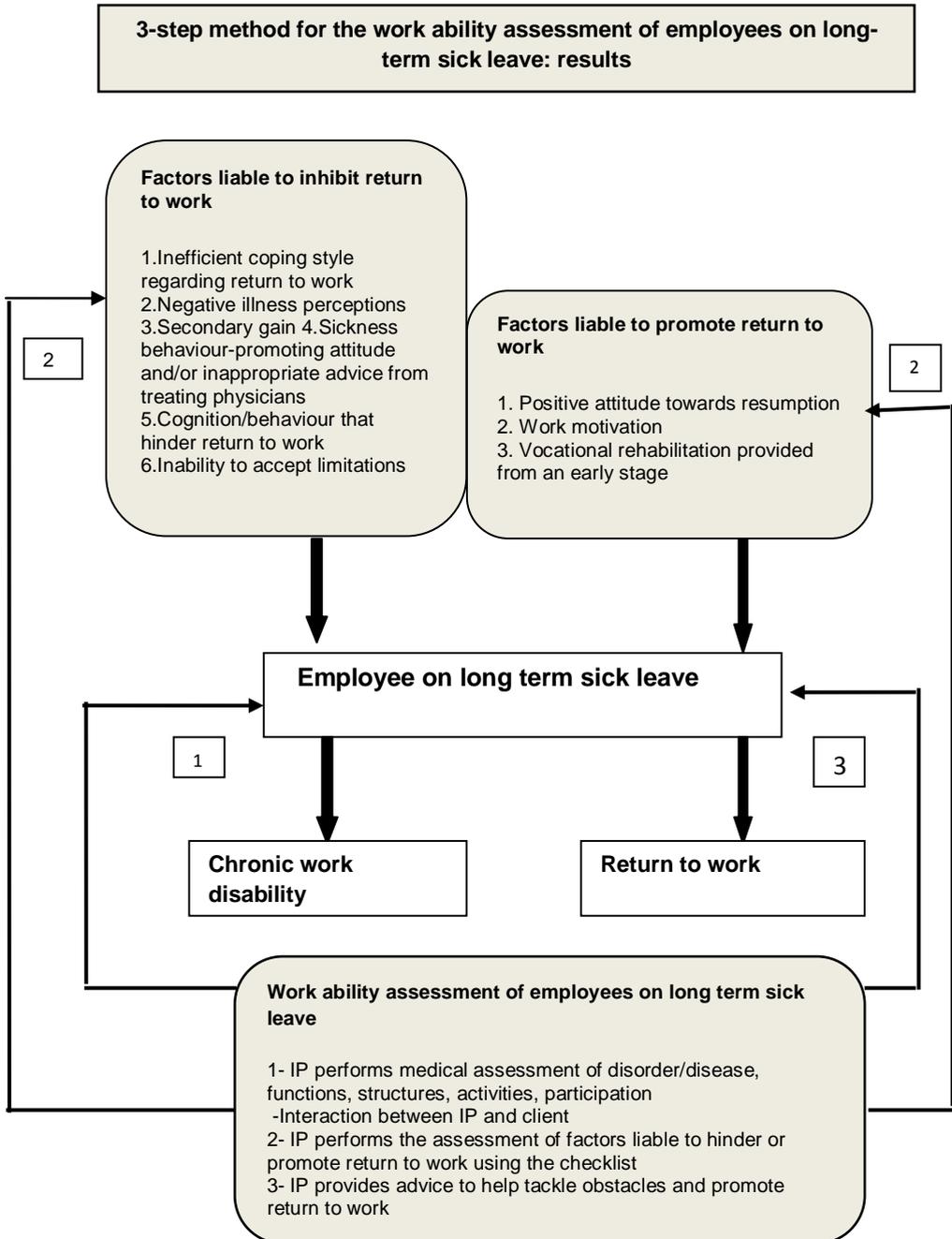


Figure 2. Three-step method for the assessment of work ability and the results of this thesis. Based on ICF 2005, Dekkers-Sánchez et al 2008.

## **Recommendations**

### **Recommendations for the practice**

#### **Implications for the practice of insurance physicians**

- The checklist of factors relevant to work ability assessments of employees on long-term sick leave is a tool meant to complement IP's judgement. Applying the checklist during work ability assessments helps ensure that key factors involved in the maintenance of the sick leave are identified and can help improve the accuracy of work ability assessments.
- Knowledge about the factors that impede return to work allows the targeting of tailored interventions aiming at promoting return to work, adding value to the profession.
- Use the checklist in routine practice and make use of common language to describe the factors associated with long-term sick leave in your communication with other (health) professionals.
- Use the checklist in routine practice to improve the quality of your work ability assessments.

#### **Implications for educational programs for IPs**

The checklist of factors is comprehensive, user-friendly and is suitable for educational goals. The checklist may require training in practice.

- Training in how to use the checklist during the work ability assessment should include real cases.
- IPs need education about effective interventions and on how to advise promote work resumption by employees on long-term sick leave.

#### **Implications for the organisation's policy makers**

Proper management of long-term sick leave is crucial due to the severe financial and social consequences for the individual and high costs to society. Work-ability assessments are an important tool in managing long-term sick leave. The new developed checklist of factors relevant to the work ability assessment of employees on long-term sick leave can improve the quality of work ability assessments performed after 18 months of sick leave. The results of a nationwide implementation study showed that IPs are willing and able to use the checklist during work ability assessments of employees on long-term sick leave. This is a promising finding, suggesting good potential for improving the scientific

basis of insurance medicine, however, the literature shows that continued efforts are needed to promote the sustained use of innovations in practice (44-48). The policy makers of the organisation where most IPs work should promote the sustained use of the checklist in practice through monitoring, evaluation, promoting dissemination of the checklist and providing personalised training if needed. In addition, the application of the three-step method described in this thesis could help promote the return to work by employees on long-term sick leave.

- The use of the checklist could be promoted by introducing a digital version, which should be embedded in the work routine.
- Practical measures should be taken to encourage IPs to use the checklist to identify factors that hinder or promote return to work. Adjustments to the digital assessment reports used by IPs could be helpful, e.g., a subsection with factors relevant to work ability assessment could help IPs recall their findings.
- The systematic use of the checklist by IPs can promote consistency, uniformity and transparency in the work ability assessments.
- The checklist can help promote professional development of IPs, contributing to the improvement of the expertise of the organisation as a whole.
- It is recommended that step 3 be further investigated and implemented in practice. Knowledge of which clients have characteristics that hinder return to work is not sufficient, the most important application of the checklist is in identifying modifiable obstacles to return to work (step 2). The clients' work ability assessment (step 2) should be translated into an action plan to address the identified obstacles (step 3).
- IPs should be helped in providing advice to their clients (step 3), e.g., by promoting cooperation with labour experts, vocational-rehabilitation professionals, health-behaviour experts or other health professionals. Sometimes, IPs will need to refer clients to other health professionals who can help them reduce the obstacles to return to work. Inter-professional (regional) meetings and organised professional collaborations between IPs and other health professionals could reduce obstacles to return to work.
- Up-to date information about the best available interventions for promoting return to work should be available to IPs for routine use (step 3).

### **Recommendations for future research**

- Research on the selective use of the checklist for work ability assessments of employees on sick leave due to specific diseases would be useful. The use of the checklist in cases with complex conditions (e.g., comorbidities and medically unexplained disorders) would help determine whether the checklist is especially useful for these types of medical conditions.
- Research on interventions aimed at improving the prognosis for return to work would help improve work-related outcomes.
- The systematic recording of the factors by IPs using the checklist can be useful in identifying research and intervention priorities.
- Evidence-based, factor-targeted interventions to effectively manage the factors that hinder return to work should be developed. In that way, step 3 can be incorporated into work ability assessments. Furthermore, the views of clients and IPs concerning the introduction of the 3-step method should also be investigated.

### **General Conclusions**

The aim of this thesis was to gather knowledge about factors associated with long-term sick leave to improve work ability assessments of employees on long-term sick leave.

- Four studies revealed 30 personal and environmental factors that promote return to work and 27 personal and environmental factors that hinder return to work by employees on long-term sick leave.
- According to IPs, six factors that hinder return to work and three factors that promote return to work should be considered during work ability assessments of employees on long-term sick leave.
- It is feasible to implement a checklist to assess factors relevant to work ability assessments of employees on long-term sick leave.

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## Chapter 8





# Summary



### Summary

The topic of this thesis is the assessment in Insurance Medicine of the work ability of employees on long-term sick leave. As stated in **Chapter 1**, this thesis focuses on sick leave lasting longer than 18 months; the Dutch social-security system stipulates that a worker is eligible for disability benefits after 24 consecutive months of sick leave. Despite the impact of long-term sick leave, little information is available on factors that perpetuate sick leave. In the Netherlands, Insurance physicians (IPs) are responsible for assessing the work ability of employees on sick leave after 18 months. The work ability assessment is based principally on the available medical information, anamnesis and physical examination of the sick listed employee. There is a scarcity of instruments to assist IPs during the work ability assessment of employees on long-term sick leave.

The objective of this thesis is to contribute to the improvement of the work ability assessment of employees on long-term sick leave (18-24 months).

The following research questions have been posed:

- 1-Which factors hinder or promote return to work of employees on long-term sick leave?
- 2-Which factors that hinder or promote return to work should be considered during the work ability assessment of employees on long-term sick leave?
- 3-Is it feasible to implement a checklist to assess factors affecting work ability in the daily practice of Dutch insurance physicians?

The first research question was first investigated by a search of the international literature. Due to a lack of studies on this topic, the first question was further addressed from the perspective of employees on long-term sick leave, vocational-rehabilitation professionals and insurance physicians.

**Chapter 2** addresses the first research question and describes a systematic literature review performed with the aim to investigate which factors are associated with continued sick leave among workers on long-term sick leave. We performed a sensitive search of biomedical and psychological databases (Medline, EMBASE, PsycINFO and the Web of Science). First, factors associated with long-term sick leave were classified as individual or work-related factors. Second, the factors were classified as predisposing, precipitating and perpetuating factors. Only cohort studies of workers on sick leave for more than six weeks at baseline were included. Synthesis of the evidence of the factors reported in the five included articles showed that there is insufficient evidence for the factors found in this review, as we identified

## Summary

only one study for each factor. These studies seem to confirm our hypothesis that there are significant predisposing factors, which, regardless of the disease specific health problem of the individual worker, are associated with long-term sick leave. In total, 16 significant factors associated with long-term sick leave were identified. All of these factors were classified as predisposing factors for long-term sick leave. Only two perpetuating factors for long-term sick leave could be identified: older age and history of sick leave.

**Chapter 3** also addresses the first question from the perspective of employees on long-term sick leave. Five focus-group interviews were conducted with twenty-seven disability claimants suffering from different disorders who had been on long-term sick leave for at least 18 months. A qualitative data analysis was performed using a conceptual framework to identify barriers and facilitating factors for the return to work, which allowed us to compare the factors identified in the patients with those identified in the literature. Four main types of obstacles were identified: health-related, personal, social, and work-related. Four main types of factors facilitating the return to work were identified: favourable working conditions, positive personal characteristics of the employee, the influence of the social environment, and the influence of the employee's personal economic situation. The results of this study show that, aside from sickness, non-medical factors, such as older age, the health-insurance system, poor working relationships, poor control over the working situation, lack of modified labour conditions, negative perceptions of illness and low expectations for recovery, are perpetuating factors for long-term sick leave by disabled patients. Promoting factors for the return to work include having influence over the working hours and tasks, work motivation, financial consequences of sick leave, a positive attitude and support from the employer.

**Chapter 4** presents a qualitative study that explored factors promoting the sustained return to work among employees on sick leave from the perspective of experienced vocational rehabilitation professionals (VRPs) specialised in the reintegration of employees on long-term sick leave. This study focuses on potentially modifiable factors that stimulate RTW. Crucial aspects of interventions to promote RTW were also investigated. Semi-structured interviews using open-ended questions were conducted face-to-face with 23 VRPs. The participants were selected from a directory of VRPs of the Dutch Association of Work Rehabilitation Counselling

Five main themes related to important modifiable factors promoting the sustained return to work emerged from our data: optimal guidance of the employee, effective communication and collaboration with the employee and

other RTW stakeholders, positive characteristics of the individual employee, and positive characteristics of the work and social environment. Crucial aspects of interventions include gathering information and setting priorities, improving qualifications, influencing cognition, monitoring the employee through the rehabilitation process, offering different tailor-made interventions at various stages within a personal time-bound step plan-of-action, and preparing the employee and the work environment for RTW.

The conclusion of this study is that sustained RTW for employees on long-term sick leave can be achieved by focusing on modifiable promoting factors for RTW and through the simultaneous use of different aspects of RTW interventions in a multidisciplinary approach based on a client-focused perspective according to the specific needs of the individual.

**Chapter 5** addresses the second research question and presents a Delphi study conducted under 102 experienced insurance physicians. The aim of the Delphi study was to determine which factors that hinder or promote RTW should be included in the work ability assessment of employees on long-term sick leave from the perspective of experienced IPs. A Delphi study was performed using online questionnaires, with the aim of reaching a consensus among insurance physicians (IPs) on factors that must be considered in the assessment of the work ability of employees who have not worked for two years. One hundred and two insurance physicians reached a consensus on 51 factors important for the return to work (RTW) of employees on long-term sick leave; those most relevant to the assessment of work ability were identified. From 22 relevant factors, consensus was reached on nine factors relevant to the assessment of the work ability of employees on long-term sick leave. A total of nine relevant factors were found. The factors that promote resumption of work are motivation, positive attitude towards RTW, and vocational rehabilitation at an early stage. Factors that hinder resumption of work are secondary gain from illness, negative perceptions of illness, inefficient coping, work-inhibiting thoughts and behaviour, incorrect advice given by treating physicians regarding resumption of work, and inability to cope with disabilities.

The conclusion of this study is that in addition to an understanding of the medical condition, information about non-medical factors is necessary for a proper assessment of the work ability of employees on long-term sick leave. Non-medical personal and environmental factors may either hinder or promote RTW and must be considered in assessing the work ability of employees on long-term sick leave.

**Chapter 6** addresses the second research question and describes a nationwide implementation study of an instrument to assess the nine factors relevant to work ability assessments of employees on long-term sick leave. The aim of this study was to determine the feasibility of routinely using the “checklist of factors relevant to RTW” (including the nine factors) for Dutch IPs. Feasibility was defined as the willingness and ability of IPs to incorporate the use of the checklist into their daily work. An additional objective of this study was to explore the factors that hinder or promote the routine implementation of the checklist. Before the implementation study, a context analysis was performed to identify the barriers and promoting factors for the implementation of the checklist. During the implementation study, IPs were asked to assess, identify and report the factors using the checklist during six work ability assessments in daily practice.

The outcome measure was the percentage of IPs that used the checklist in at least three of the six work ability assessments performed during the implementation study. The study was defined as successful when >50% of IPs used the checklist in at least three of the six work ability assessments performed using the checklist. A frequency analysis was performed. Official work ability assessment records were analysed to determine whether the IPs reported the assessed factors in the official work ability assessment records. In total, 79 IPs of 200 IPs in all offices of the Dutch Employees Insurance Authority (UWV) participated in the implementation study. The results demonstrated good adherence in using the checklist (89%). Almost all of the IPs (96%) assessed at least one factor. An analysis of 474 work ability assessment records indicated that 90% of the IPs reported at least one of the factors. The conclusion of this study is that the checklist of factors appears to be useful to health professionals assessing the barriers to and facilitators of RTW in employees on long-term sick leave.

In **Chapter 7**, the main findings of the five studies in this thesis are summarised and research strategies used in this thesis are discussed.

The General Conclusion includes the main findings with regard to the three research questions posed in this thesis:

1. Thirty personal and environmental factors promote return to work by employees on long-term sick leave.  
Twenty-seven personal and environmental factors hinder return to work by employees on long-term sick leave.
2. Of the 57 factors, six factors that promote return to work and three that hinder return to work should be considered in work-ability assessments of employees on long-term sick leave, according to IPs.
3. It is feasible to implement a checklist to assess factors relevant to work ability in assessments of employees on long-term sick leave.

Finally, implications for the practice of the three groups of stakeholders are considered. The **main recommendations** are as follows:

### **For insurance physicians in practice:**

- The systematic use of the checklist can help identify obstacles to return to work by disability claimants.
- IPs can provide tailored advice to their clients to eliminate or reduce the factors that hinder resumption of work.
- The systematic use of the checklist promotes transparency in the work ability assessments of clients on long-term sick leave.

### **For trainers:**

- Training on how to use the checklist is needed to optimise the application of the checklist in the practice.
- Knowledge of evidence-based interventions should be offered to IPs.

### **For organisations:**

- Policy makers in the organisation where most IPs work should make efforts to promote the sustained use of the checklist in the practice through monitoring, evaluation, promoting further dissemination of the checklist and providing individualised training if needed.
- Insurance physicians should be aided in the use of the checklist in the practice.
- Knowledge of evidence-based interventions should be developed to assist IPs in advising their clients.
- Research on interventions targeting factors that hinder return to work is required to promote work participation of employees on long term sick leave.

## Samenvatting



## Samenvatting

Langdurig ziekteverzuim is een erkend sociaal-economisch en sociaal-geneeskundig probleem op nationaal en internationaal niveau. Verschillende landen hebben wettelijke maatregelen genomen om de kosten van langdurig verzuim en arbeidsongeschiktheid te verminderen. Langdurig ziekteverzuim is echter nog steeds een probleem met ingrijpende financiële gevolgen voor de samenleving, organisaties, werkgevers, werknemers en hun familieleden. Langdurig verzuim veroorzaakt productiviteitsverlies, persoonlijk leed en hoge medische en revalidatiekosten.

Sinds de invoering van de wet Werk en Inkomen naar Arbeidsvermogen (WIA) in januari 2006 is activering en re-integratie van zieke werknemers gedurende de eerste twee jaar van ziekte de gezamenlijke verantwoordelijkheid van werkgever en werknemer. Na twee jaar ziekteverzuim kunnen zieke werknemers in aanmerking komen voor een WIA-uitkering. Na de invoering van de Wet WIA is het aantal nieuwe arbeidsongeschikten weliswaar sterk afgenomen, maar het aantal mensen dat jaarlijks in de WIA instroomt is nog steeds aanzienlijk. In 2012 ontvingen ruim 161.300 personen een WIA-uitkering in Nederland.

De kernfunctie van verzekeringsartsen bestaat uit het vaststellen van het werkvermogen, de mogelijkheden en de beperkingen om arbeid te verrichten van (langdurig) zieke werknemers. De beoordeling van het werkvermogen van langdurig zieke werknemers is complex omdat verschillende factoren kunnen bijdragen tot de stagnatie van het herstel. Verzekeringsartsen hebben weinig instrumenten tot hun beschikking voor de beoordeling van het werkvermogen van zieke werknemers. Langdurig zieke werknemers hebben vaak complexe problemen en ondervinden veel belemmeringen in hun functioneren. De afstand tot de arbeidsmarkt is vaak groot vanwege medische beperkingen, psychosociale problemen of door een samenspel van verschillende factoren. Uit de literatuur blijkt dat er weinig bekend is over factoren die samenhangen met langdurig ziekteverzuim. Onderkenning van belemmerende en bevorderende factoren voor werkhervatting is van cruciaal belang voor verzekeringsartsen om gerichte interventies te kunnen inzetten om de belemmerende factoren op te heffen of te doen verminderen en de bevorderende factoren te stimuleren.

## Samenvatting

Het doel van dit proefschrift is om een bijdrage te leveren aan de verbetering van de kwaliteit van arbeidsongeschiktheidsbeoordelingen van cliënten die langdurig verzuimen. In dit promotietraject is kennis over factoren die werkhervatting belemmeren of bevorderen bij langdurig zieke werknemers (verzuim tussen 18 en 24 maanden) verzameld vanuit verschillende perspectieven. Deze nieuwe kennis is gebruikt voor de ontwikkeling van een instrument om verzekeringsartsen te helpen relevante factoren voor werkhervatting te identificeren. In een implementatiestudie is het gebruik van het instrument in de dagelijkse praktijk van verzekeringsartsen onderzocht.

De volgende onderzoeksvragen zijn gesteld en beantwoord:

- 1-Welke factoren belemmeren of bevorderen werkhervatting van werknemers die langer dan 18 maanden verzuimen?
- 2-Welke belemmerende of bevorderende factoren voor werkhervatting dienen meegewogen te worden bij de arbeidsongeschiktheidsbeoordeling van langdurig zieke werknemers?
- 3-Is het haalbaar om een signaleringslijst met relevante factoren voor arbeidsongeschiktheidsbeoordelingen van langdurig zieke werknemers te implementeren in de praktijk van verzekeringsartsen werkzaam bij WIA afdelingen?

Om de eerste onderzoeksvraag te beantwoorden is de internationale literatuur van 1990 tot september 2006 systematisch bestudeerd. Door middel van een zoekstrategie werden artikelen gezocht in drie verschillende databases (Medline, PsychInfo, Embase). De factoren gerelateerd aan ziekteverzuim zijn ingedeeld in drie typen factoren: predisponerende factoren, uitlokkende factoren, en onderhoudende factoren. Er zijn geen studies gevonden over factoren voor verzuim langer dan 18 maanden. Alleen longitudinale studies over onderhoudende factoren voor ziekteverzuim langer dan zes weken zijn geïnccludeerd. Er zijn geen studies gevonden over onderhoudende factoren voor langdurig verzuim. De conclusie van het literatuuronderzoek is dat er meer studies nodig zijn over de factoren die langdurig ziekteverzuim in stand houden (Hoofdstuk 2).

Aangezien het literatuuronderzoek geen informatie kan bieden over onderhoudende factoren voor langdurig verzuim, zijn andere bronnen van relevante informatie gezocht om de eerste onderzoeksvragen te kunnen beantwoorden. In hoofdstuk 3 staat het perspectief van de zieke werknemer centraal. Om inzicht te krijgen in de factoren die het herstel

van langdurig zieke werknemers belemmeren of bevorderen zijn groepsinterviews gehouden met WIA-aanvragers. Vijf focusgroepen zijn georganiseerd in vijf verschillende geografische regio's. Op basis van een kwalitatieve data analyse zijn 14 herstelbelemmerende factoren en 9 herstelbevorderende factoren voor werkhervatting in vooraf gedefinieerde categorieën ondergebracht, conform een nieuw multicausaal model, ontwikkeld om de factoren voor langdurig ziekteverzuim in kaart te kunnen brengen. De conclusie van het focusgroeponderzoek was dat klachten en beperkingen ten gevolge van ziekte slechts een deel van belemmerende factoren voor werkhervatting vormen en dat een aantal belemmerende en bevorderende factoren potentieel beïnvloedbaar zijn.

Om de eerste onderzoeksvraag vanuit verschillende invalshoeken te kunnen beantwoorden, is ook informatie verzameld vanuit het perspectief van re-integratieconsulenten, gespecialiseerd in de begeleiding van werknemers die langdurig verzuimen. Semi-gestructureerde interviews zijn gehouden met focus op de beïnvloedbare bevorderende factoren voor werkhervatting. De data zijn geanalyseerd door middel van kwalitatieve onderzoekstechnieken. Herstelbelemmerende factoren kunnen worden gerelateerd aan: inhoud van het werk, arbeidsverhoudingen, arbeidsvoorwaarden, combinatie werk en zorgtaken, ziekte, beperkingen, participatieproblemen, oudere leeftijd, coping stijl, karakter stijl, externe factoren, eigen effectiviteitverwachtingen, ziektepercepties, arts-gerelateerde factoren. Herstelbevorderende factoren kunnen worden gerelateerd aan: regelmogelijkheden, financiële consequenties van verzuim, motivatie, aangepast werk, werk relaties, externe factoren, attitude t.a.v werkhervatting, sociale invloed, vroege start van de re-integratie (Hoofdstuk 4).

Voor het antwoord op vraagstelling 2 is vervolgens het perspectief van ervaren verzekeringsartsen onderzocht. Alleen geregistreerde verzekeringsartsen met ervaring in de beoordeling van WIA-cliënten nemen deel aan het Delphi onderzoek. Verzekeringsartsen kregen een vragenlijst met 56 factoren voorgelegd. Deze factoren zijn afkomstig van drie bronnen: literatuuronderzoek, focusgroeponderzoek onder zieke werknemers en interviews met re-integratieconsulenten. Verzekeringsartsen bereiken consensus over 22 relevante belemmerende en bevorderende factoren voor werkhervatting van WIA aanvragers. In totaal 102 verzekeringsartsen met een gemiddelde werkervaring van 15 jaar nemen deel aan de laatste rondes van het

consensus onderzoek. Meer dan 55% van de verzekeringsartsen bereiken 50T50Tconsensus over zes relevante belemmerende factoren en drie relevante bevorderende factoren voor de beoordeling van de arbeidsongeschiktheid van WIA-aanvragers (Hoofdstuk 5). Een nieuw instrument is ontwikkeld dat bruikbaar is in de spreekkamer van verzekeringsartsen. De “Signaleringslijst relevante factoren voor de arbeidsongeschiktheidsbeoordeling van langdurig zieke werknemers” heeft als doel verzekeringsartsen te ondersteunen bij het identificeren van de negen relevante factoren bij WIA-aanvragers. In een landelijke implementatiestudie is onderzocht of het gebruik van de signaleringslijst haalbaar is bij de WIA-beoordeling (Hoofdstuk 6). De implementatie is voorafgegaan door een context analyse om de obstakels voor de implementatie van de signaleringslijst te identificeren. Daarna zijn specifieke strategieën ontwikkeld om de obstakels op te heffen en de implementatie van de signaleringslijst in de praktijk te bevorderen. In totaal nemen 79 verzekeringsartsen van de 200 uitgenodigde verzekeringsartsen deel aan de implementatiestudie. Verzekeringsartsen zijn gevraagd om de signaleringslijst te gebruiken bij zes willekeurige WIA-beoordelingen. De deelnemers onderzoeken de factoren bij de WIA-cliënten en beschrijven de factoren in de onderzoeksrapportages. De resultaten zijn positief; 89% van de verzekeringsartsen gebruikten de signaleringslijst tijdens de implementatiestudie, 96% van de verzekeringsartsen identificeert minimaal een factor. Uit de analysis van 474 verzekeringsgeneeskundige rapportages blijkt dat 90% van de verzekeringsartsen minimaal één factor rapporteerde. Verzekeringsartsen vinden dat het gebruik van de signaleringslijst de beoordeling systematischer, transparanter en gestructureerd maakt waardoor de kwaliteit van de beoordeling wordt bevorderd (Hoofdstuk 6).

Naar aanleiding van de uitkomsten van de vijf uitgevoerde studies kunnen de onderzoeksvragen als volgt worden beantwoord:

### **1. Welke factoren belemmeren of bevorderen werkhervatting van werknemers die langer dan 18 maanden verzuimen?**

In totaal 30 bevorderende factoren voor werkhervatting werden geïdentificeerd:

- Persoonsgebonden factoren (n = 6): motivatie t.a.v. werkhervatting, positieve verwachtingen over de eigen-effectiviteit, positieve houding van de werknemer ten aanzien van werkhervatting, positieve

persoonlijke eigenschappen van de werknemer, positieve betekenis van het werk, positieve ziektepercepties.

- Werkgerelateerde factoren (n = 4): mate van controle over de werksituatie, vroege start van de re-integratie, ondersteunende werkomgeving, positieve werkomstandigheden
- Factoren die samenhangen met begeleiding van de werknemer (n = 16):
  - Factoren die het gedrag van zieke werknemers kunnen beïnvloeden (n = 6): verbetering van de sociale vaardigheden van de werknemer, zieke werknemer leren omgaan met zijn beperkingen, het beïnvloeden van werkbelemmerende cognities en/of gedrag, het stimuleren van het verantwoordelijkheidsgevoel van de werknemer, werknemer confronteren met zijn eigen toekomst, inzicht in eigen situatie verbeteren.
  - Factoren die samenhangen met de communicatie (n = 7): zieke werknemers serieus nemen, open communicatie tussen re-integratie-stakeholders, effectieve communicatie met de zieke werknemer, communicatie op hetzelfde niveau of in dezelfde taal, optimale begeleiding van reïntegratie begeleiders, samenwerking tussen alle partijen betrokken in de re-integratie, coöperatie van professionele sociale netwerk van de werknemer.
  - Arts-gerelateerde factoren (n = 3): een goede bedrijfsarts, het vermijden van tegenstrijdige adviezen van de behandelende artsen, belangstelling van behandelende artsen voor de werk situatie.
- Socio-economische factoren (n = 4): stimulerende sociale omgeving, financiële prikkels voor werknemer, financiële prikkels voor werkgevers, financiële gevolgen van ziekteverzuim.

In totaal 27 belemmerende factoren voor werkhervatting werden geïdentificeerd:

- Factoren gerelateerd aan de medische situatie (n = 5): de aanwezigheid van ziekte, beperkingen in activiteiten, belemmeringen, beperkingen in participatie, voorgeschiedenis van ziekteverzuim.
- Persoonsgebonden factoren (n = 8): hogere leeftijd, laag opleidingsniveau, karakterstijl, negatieve ziektepercepties, negatieve houding van de werknemer ten aanzien van werkhervatting, inefficiënte coping ten aanzien van werkhervatting, inadequate coping stijl, negatieve eigen effectiviteitverwachtingen.

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- Werkgerelateerde factoren (n = 5): disbalans tussen werkvermogen en werk inhoud, werk inhoud, problematische werkomgeving, problematische werkverhoudingen, ongunstige werkomstandigheden.
- Factoren die samenhangen met begeleiding van de werknemer (n = 4):
  - Factoren gerelateerd aan de re-integratie (n = 1): Inefficiënte begeleiding van re-integratie stakeholders.
  - Artsgerelateerde factoren (n = 3)= ziektegedrag bevorderende attitude en inadequate adviezen ten aanzien van werkhervatting van behandelaars, medicalisering, artsen die zich richten op strikt medische kwesties in plaats van aandacht te besteden aan niet-medische factoren.
- Sociale factoren en omgevingsfactoren (n = 5): gebrek aan sociale steun, sociale invloed, het combineren van betaald werk en zorg voor het gezin, negatieve omgevingsfactoren, secundaire ziekte winst (hoofdstukken 2 - 5).

### **2. Welke belemmerende of bevorderende factoren voor werkhervatting dienen meegewogen te worden bij de arbeidsongeschiktheidsbeoordeling van langdurig zieke werknemers?**

Volgens verzekeringsartsen dienen de volgende negen relevante factoren te worden meegewogen bij de beoordeling van arbeidsongeschiktheid van langdurig zieke werknemers:

Relevante belemmerende factoren zijn: secundaire ziekte winst, inefficiënte coping stijl ten aanzien van werkhervatting, negatieve ziektepercepties, ziektegedrag bevorderende attitude van behandelaars en/of inadequate adviezen van behandelaars t.a.v. werkhervatting, werkbelemmerende cognities en gedrag, moeite om beperkingen te accepteren.

Relevante bevorderende factoren zijn: motivatie t.a.v. werkhervatting, positieve attitude t.a.v. werkhervatting, re-integratie zo snel mogelijk starten.

### **3. Is de implementatie van een signaleringslijst met relevante factoren voor arbeidsongeschiktheidsbeoordelingen van langdurig zieke werknemers haalbaar?**

De implementatie van een signaleringslijst met relevante factoren voor arbeidsongeschiktheidsbeoordelingen van langdurig zieke werknemers is

haalbaar omdat het implementatiedoel was bereikt: meer dan de helft van de verzekeringsartsen gebruikte de signaleringslijst in minimaal drie van de zes beoordelingen uitgevoerd tijdens de implementatiestudie.

### **Conclusies**

De belangrijkste conclusies op basis van de resultaten van dit proefschrift zijn:

1. De resultaten van vier studies tonen aan dat 30 persoonsgebonden factoren en omgevingsfactoren werkhervatting van langdurig zieke werknemers kunnen bevorderen en dat 27 persoonsgebonden en omgevingsfactoren werkhervatting van langdurig zieke werknemers kunnen belemmeren.
2. Volgens verzekeringsartsen dienen negen relevante factoren te worden meegewogen bij de WIA-beoordeling van arbeidsongeschiktheid werknemers die langer dan 18 maanden verzuimen.
3. De implementatie van een signaleringslijst met relevante factoren voor arbeidsongeschiktheidsbeoordelingen van langdurig zieke werknemers is haalbaar gebleken in de dagelijkse praktijk van verzekeringsartsen in Nederland.

### **Aanbevelingen**

De belangrijkste aanbevelingen voor de praktijk zijn:

- Voor verzekeringsartsen in de praktijk:
  - Het systematisch gebruik van de signaleringslijst kan helpen om herstelbelemmerende factoren te identificeren bij WIA-cliënten en hen advies te geven om deze factoren op te heffen of te reduceren.
  - Het systematisch gaan gebruiken van de signaleringslijst kan de transparantie van de arbeidsongeschiktheidsbeoordelingen van WIA-cliënten bevorderen.
- Voor opleiders van verzekeringsartsen:
  - Trainingen voor het gebruik van de signaleringslijst in de praktijk is wenselijk om de toepassing van de signaleringslijst in de praktijk te optimaliseren. Deze opleiding kan worden aangeboden tijdens de opleiding aan nieuwe verzekeringsartsen of als bijscholing voor ervaren verzekeringsartsen.

## Samenvatting

-Kennis over evidence-based interventies dient te worden aangeboden aan verzekeringsartsen.

- Voor UWV als organisatie:
  - Verzekeringsartsen dienen te worden gefaciliteerd bij het gebruik van de signaleringslijst in de praktijk.
  - Ontwikkeling van kennis over evidence-based interventies is de volgende stap om verzekeringsartsen te ondersteunen bij het adviseren van cliënten.



# Resumen



## Resumen

El tema de esta tesis es la evaluación de la capacidad de trabajo de los trabajadores en incapacidad laboral prolongada en el área de la medicina de la Seguridad Social. Como se indicó en el **capítulo 1**, esta tesis se centra en el absentismo laboral prolongado por enfermedad. El sistema de seguridad social holandesa estipula que un trabajador tiene derecho a beneficios por incapacidad después de 24 meses consecutivos de ausencia por enfermedad. A pesar del impacto del absentismo laboral prolongado por enfermedad, existe poca información disponible sobre los factores que perpetúan el absentismo laboral. En los Países Bajos, los médicos de seguridad social son responsables de la evaluación de la capacidad de trabajo de los trabajadores en incapacidad laboral prolongada después de 18 meses de enfermedad. La evaluación de la capacidad de trabajo principalmente se basa en la información médica, anamnesis y el examen físico del trabajador enfermo. Hay una escasez de instrumentos para asistir a los médicos de seguridad social durante la evaluación de capacidad de trabajo de los trabajadores en incapacidad laboral prolongada.

El objetivo de esta tesis es contribuir a la mejora de la evaluación de capacidad de trabajo de los de los trabajadores en incapacidad laboral prolongada (18-24 meses).

Las siguientes preguntas de investigación se han planteado:

- 1-Qué factores impiden o promueven la reincorporación laboral de los trabajadores en incapacidad laboral prolongada?
- 2 ¿Qué factores que impiden o promueven la reincorporación laboral de los trabajadores en incapacidad laboral prolongada deben ser considerados durante la evaluación de la capacidad de trabajo?
- 3 ¿Es posible implementar una lista de control para evaluar los factores que afectan la capacidad de trabajo en la práctica diaria de los médicos de medicina social en Holanda?

La primera pregunta de investigación fue investigada a través de una búsqueda sistemática de la literatura internacional. Debido a la falta de estudios sobre este tema, la primera pregunta se investigó desde la perspectiva de los trabajadores en incapacidad laboral prolongada, de los profesionales de rehabilitación vocacional y de los médicos especializados en medicina social.

El **capítulo 2** se refiere a la primera pregunta de investigación y presenta una revisión sistemática de la literatura realizada con el objetivo de investigar qué factores se asocian con el absentismo laboral por enfermedad entre los trabajadores en incapacidad laboral prolongada. Se realizó una búsqueda sensible de bases de datos biomédicas y psicológicas (Medline, EMBASE, PsycINFO y Web of Science). En primer lugar, los factores asociados con el absentismo laboral por enfermedad de larga duración se clasificaron como factores individuales o factores relacionados con el trabajo. En segundo lugar, los factores fueron clasificados como predisponentes, precipitantes y factores de perpetuación. Sólo se incluyeron los estudios de cohortes de trabajadores ausentes por enfermedad durante más de seis semanas al inicio del estudio. Síntesis de la evidencia de los factores reportados en los cinco artículos incluidos mostraron que existe evidencia insuficiente de los factores que se encuentran en esta revisión sistemática, ya fue identificado sólo un estudio por cada factor. Estos estudios parecen confirmar nuestra hipótesis de que existen factores predisponentes importantes que, independientemente de los problemas de salud específicos del trabajador, se asocian con la ausencia laboral por enfermedad prolongada. En total, se identificaron 16 factores significativos asociados con la ausencia laboral prolongada. Todos estos factores fueron clasificados como factores que predisponen la ausencia laboral por enfermedad prolongada. Sólo dos factores que perpetúan la ausencia laboral prolongada pudieron ser identificados: la edad avanzada y la ausencia por enfermedad en el pasado.

El **capítulo 3** aborda también la primera pregunta desde la perspectiva de los trabajadores en incapacidad laboral prolongada. Cinco entrevistas mediante la estrategia de grupos focales se llevaron a cabo con veintisiete trabajadores en incapacidad laboral prolongada con diferentes enfermedades que habían estado de baja por enfermedad al menos 18 meses. Un análisis cualitativo de los datos se realizó a través de un marco conceptual para identificar los factores que impiden o promueven la reincorporación laboral, lo que nos permitió comparar los factores identificados en los trabajadores con los factores identificados en la literatura. Se identificaron cuatro tipos principales de factores que obstaculizan la reincorporación laboral: factores relacionados con la salud, factores personales, factores sociales, y factores relacionados con el trabajo. Se identificaron cuatro tipos principales de factores que facilitan la reincorporación al trabajo: condiciones favorables de trabajo,

características personales positivas del trabajador, la influencia del entorno social, y la influencia de la situación económica personal de los trabajadores. Los resultados de este estudio muestran que, aparte de la enfermedad, los factores no médicos, tales como la edad avanzada, el sistema de seguro de salud, las relaciones de trabajo precarias, falta de control sobre la situación de trabajo, la falta de condiciones laborales modificadas, las percepciones negativas de la enfermedad y bajas expectativas de recuperación, son factores que perpetúan la ausencia prolongada por enfermedad en los trabajadores con discapacidad laboral. Los factores que promueven la reincorporación laboral incluyen tener influencia sobre las horas de trabajo y las tareas, motivación en el trabajo, las consecuencias financieras de la licencia por enfermedad, una actitud positiva y de apoyo por parte del empleador.

El **capítulo 4** presenta un estudio cualitativo que explora los factores que favorecen la reincorporación laboral prolongada de los trabajadores en incapacidad laboral prolongada desde la perspectiva de los profesionales de rehabilitación profesional con experiencia especializados en la reintegración de los de los trabajadores en incapacidad laboral prolongada. Este estudio se centra en factores potencialmente modificables que estimulan la reincorporación laboral. También se investigaron los aspectos cruciales de las intervenciones para promover el retorno al trabajo. Las entrevistas semi-estructuradas con preguntas abiertas se realizaron cara a cara con 23 profesionales de rehabilitación profesional. Los participantes fueron seleccionados de un directorio de profesionales de rehabilitación profesional de la Asociación Holandesa de Consejería de Rehabilitación del Trabajo. Cinco temas principales relacionados con importantes factores modificables que promueven el retorno sostenido al trabajo surgieron de nuestros datos: la orientación óptima de los trabajadores, la comunicación y la colaboración efectiva con los trabajadores y otras partes interesadas en el retorno al trabajo, las características positivas de cada trabajador, y las características positivas del trabajo y del entorno social. Aspectos cruciales de las intervenciones incluyen la recopilación de información y el establecimiento de prioridades, la mejora de las cualificaciones del trabajador, influenciar los procesos cognitivos, el seguimiento del trabajador enfermo a través del proceso de rehabilitación, ofrecer intervenciones a la medida en las distintas etapas del absentismo laboral a través de un plan estratégico de acción personal dentro de un plazo determinado, y la preparación de los trabajadores y el ambiente de

trabajo para el retorno laboral del trabajador enfermo. La conclusión de este estudio es que se puede lograr el retorno al trabajo sostenido de los trabajadores en incapacidad laboral prolongada, centrándose en la promoción de los factores modificables de retorno al trabajo y mediante el uso simultáneo de diferentes aspectos de las intervenciones de reincorporación laboral en un enfoque multidisciplinario basado en una perspectiva centrada en el cliente de acuerdo con las necesidades específicas del individuo.

El **capítulo 5** se refiere a la segunda pregunta de investigación y presenta un estudio Delphi realizado con 102 médicos de seguridad social. El objetivo del estudio Delphi fue determinar cuáles son los factores que obstaculizan o promueven el retorno al trabajo deben incluirse en la evaluación de la capacidad de trabajo desde el punto de vista de los médicos con experiencia en la evaluación de la capacidad de trabajo de los trabajadores en incapacidad laboral prolongada. El estudio Delphi se realizó mediante cuestionarios en línea, con el objetivo de llegar a un consenso entre los médicos de seguridad social sobre los factores que deben ser considerados en la evaluación de la capacidad de trabajo de los trabajadores que se encuentran en ausencia laboral durante dos años. Ciento dos médicos de seguridad social llegaron a un consenso sobre 51 factores relevantes para la evaluación de la capacidad de trabajo de los trabajadores en incapacidad laboral prolongada. A partir de 22 factores relevantes, se llegó a un consenso sobre nueve factores. Se encontraron un total de nueve factores relevantes para la evaluación de la capacidad de trabajo. Los factores que favorecen la reanudación del trabajo son la motivación, la actitud positiva hacia el retorno laboral y rehabilitación profesional en una etapa temprana. Factores que impiden la reanudación del trabajo son la ganancia secundaria de la enfermedad, las percepciones negativas de la enfermedad, estrategias ineficaces de coping, pensamientos y comportamientos que inhiben el retorno al trabajo, asesoramiento incorrecto de los médicos tratantes con respecto a la reanudación del trabajo, y la incapacidad del trabajador enfermo para hacer frente a la discapacidad. La conclusión de este estudio es que, además de un buen conocimiento de la condición médica, es necesario obtener información acerca de los factores no médicos para poder hacer una evaluación correcta de la capacidad de trabajo de los trabajadores en incapacidad laboral prolongada. Factores personales y ambientales no médicos pueden obstaculizar o promover el retorno al trabajo y deben ser

considerados en la evaluación de la capacidad de trabajo de los trabajadores en incapacidad laboral prolongada.

El **capítulo 6** se refiere a la segunda pregunta de investigación y describe un estudio de la implementación a nivel nacional de un instrumento para evaluar los nueve factores relevantes para la evaluación de la capacidad de trabajo de los trabajadores en incapacidad laboral prolongada. El objetivo de este estudio fue determinar la factibilidad del uso en forma rutinaria de la " lista de factores relevantes para la evaluación de la capacidad de trabajo" (incluyendo los nueve factores ) por los médicos de seguridad social holandeses. Viabilidad se define como la disposición y la capacidad de los médicos de seguridad social holandeses de incorporar el uso de la lista en su trabajo diario. Un objetivo adicional de este estudio fue explorar los factores que impiden o favorecen la aplicación rutinaria de la lista de factores. Antes de comenzar el estudio de implementación, se realizó un análisis del contexto para identificar las barreras y factores que promueven la aplicación de la lista de factores. Durante la implementación del instrumento, se les pidió a los médicos de seguridad social evaluar, identificar y reportar los factores en los trabajadores enfermos utilizando la lista de factores durante seis evaluaciones de la capacidad de trabajo en la práctica diaria. La medida de resultado fue el porcentaje de médicos que utilizaron la lista en al menos tres de las seis evaluaciones de la capacidad de trabajo realizadas durante el estudio de implementación. El estudio se definió como exitoso cuando > 50 % de los médicos utilizan la lista en al menos tres de las seis evaluaciones de la capacidad de trabajo realizado con el instrumento. Se realizó un análisis estadístico. Los registros de evaluación de la capacidad de trabajo oficiales fueron analizados para determinar si los médicos reportaron los factores evaluados en las actas oficiales de evaluación de la capacidad de trabajo. En total, 79 de los 200 médicos en todas las oficinas de la Autoridad de Seguridad Social de los Empleados en Holanda (UWV) participaron en el estudio de implementación. Los resultados demostraron una buena adherencia en el uso de la lista de factores ( 89 %). Casi todos los médicos participantes (96 %) evaluaron al menos un factor. Un análisis de 474 expedientes de evaluación de la capacidad de trabajo indicó que el 90 % de los médicos reportó al menos uno de los factores . La conclusión de este estudio es que la lista de factores parece ser útil para profesionales de la salud para la evaluación

de los factores que impiden o promueven la reincorporación laboral.

En el **capítulo 7**, se resumen los principales resultados de los cinco estudios realizados en esta tesis y se analizan las estrategias de investigación utilizadas en esta tesis.

La conclusión general incluye las principales conclusiones con respecto a las tres preguntas de investigación planteadas en esta tesis:

1. Treinta factores personales y ambientales promueven la reincorporación al trabajo de los trabajadores en incapacidad laboral prolongada. Veintisiete factores personales y ambientales dificultan la reincorporación al trabajo de los trabajadores en incapacidad laboral prolongada.
2. De los 57 factores, seis factores que promueven el retorno al trabajo y tres que dificultan el regreso al trabajo se deben considerar en la evaluación de la capacidad de trabajo de trabajadores en incapacidad laboral prolongada, de acuerdo a los médicos de seguridad social especializados en la evaluación de trabajadores en incapacidad laboral prolongada.
3. Es factible aplicar una lista de factores para evaluar factores relevantes para reincorporación laboral en las evaluaciones de la capacidad de los trabajadores en incapacidad laboral prolongada.

Por último, se consideran las implicaciones para la práctica.

Las principales recomendaciones son las siguientes:

Para los médicos de seguridad social en la práctica:

- El uso sistemático de la lista de factores puede ayudar a identificar los obstáculos para el retorno al trabajo que afrontan los trabajadores en incapacidad laboral prolongada.
- Los médicos de seguridad social pueden proporcionar asesoramiento personalizado a sus clientes para eliminar o reducir los factores que impiden la reanudación del trabajo.
- El uso sistemático de la lista de factores promueve la transparencia en las evaluaciones de la capacidad de trabajo de los trabajadores en incapacidad laboral prolongada.

Para los educadores:

- Los médicos de seguridad social requieren recibir formación para optimizar la aplicación de la lista en la práctica.

## Chapter 8

- Los médicos de seguridad social requieren tener conocimiento sobre las intervenciones que promueven la reintegración laboral basadas en la evidencia.

Para las organizaciones:

- Se recomienda promover el uso de la lista de factores en la práctica a través del monitoreo, la evaluación, la promoción de una mayor difusión de la lista de verificación y capacitación individual en caso de ser necesario.
- Los médicos de seguros necesitan recibir asistencia para el uso de la lista de factores en la práctica.
- Se recomienda desarrollar el conocimiento sobre las intervenciones que promueven la reintegración laboral basadas en la evidencia.
- Se requiere investigación sobre intervenciones que enfocan los factores que dificultan la reincorporación al trabajo con el fin de promover la participación laboral de los trabajadores en incapacidad laboral prolongada.



## **Signaleringslijst Relevante Factoren voor Werkhervatting**

### **Een signaleringslijst voor het herkennen van belemmerende en bevorderende factoren voor werkhervatting bij langdurig zieke werknemers**

#### **Toelichting:**

Deze signaleringslijst kan u helpen bij het herkennen en in kaart brengen van de factoren die werkhervatting belemmeren of bevorderen. Informatie over deze factoren kan nuttig zijn om uw oordeel beter te onderbouwen en uw rapportage transparanter te maken.

De volgende negen factoren zijn volgens een recent onderzoek onder 102 WIA-verzekeringsartsen belangrijk voor participatie en relevant om aandacht aan te besteden tijdens de WIA-beoordeling:

#### **Belemmerende factoren voor werkhervatting:**

1. Inefficiënte coping stijl
2. Negatieve ziektepercepties
3. Secundaire ziekte winst
4. Ziektegedrag bevorderende attitude en inadequate adviezen t.a.v. werkhervatting van behandelaars
5. Werkbelemmerende cognities/gedrag
6. Moeite om de beperkingen te accepteren

#### **Bevorderende Factoren voor werkhervatting:**

1. Positieve attitude t.a.v. werkhervatting
2. Motivatie t.a.v. werkhervatting
3. Begeleiding t.a.v. werkhervatting zo snel mogelijk starten

### Hoe kunt u deze signaleringslijst gebruiken?

- De signaleringslijst Relevante Factoren voor Werkhervatting bevat de 9 bovengenoemde factoren. Onder de naam van elk factor kunt u de definitie ervan vinden.
- Om er achter te komen of er sprake is van één of meerdere factoren die re-integratie kunnen belemmeren of bevorderen, kunt u starten met het stellen van een vraag. Om de exploratie van de factor te vergemakkelijken, staat bij elke factor een vraag vermeld. Hierdoor kunt u een betere indruk krijgen over de aanwezigheid van de factor bij een cliënt.
- Naast de vraag staan stellingen gerelateerd aan de betreffende factor. De stellingen zijn gebaseerd op de meest recente kennis en wetenschappelijke informatie over de betreffende factor.
- Deze topics bieden informatie om het antwoord op de vraag te exploreren.
- De signalering van een belemmerende factor kan aanleiding zijn voor gerichte advisering om de belemmerende factor op te heffen/te doen verminderen.
- De signalering van een bevorderende factor is belangrijk om winstpunten te identificeren/stimuleren met als doel werkhervatting te bewerkstelligen.
- In de beschouwing zijn de factoren die van toepassing zijn voor de betreffende cliënt aan te geven, en hoe ze zijn meegewogen bij de beoordeling.

## BELEMMERENDE FACTOREN VOOR WERKHERVATTING

<p><b>1. INEFFICIENTE COPINGSTIJL T.A.V. WERKHERVATTING</b></p> <p><i>(Niet effectief omgaan met de belemmeringen voor werkhervatting)</i></p> <p><b><i>Gebruikt cliënt inefficiënte coping strategieën die werkhervatting belemmeren?</i></b></p>	<ul style="list-style-type: none"> <li>• Cliënt is gefocust op zijn ziekte/behandeling in plaats van op werkhervatting</li> <li>• Cliënt zoekt geen sociale steun of hulp bij problemen tijdens de re-integratie</li> <li>• Cliënt kan geen geschikte manieren vinden om te werken met zijn ziekte</li> <li>• Cliënt wacht af wat er gaat gebeuren, laat de zaak op zijn beloop, zoekt geen oplossingen</li> <li>• Cliënt maakt de indruk probleemsituaties te vermijden door zijn verplichtingen/ werkafspraken af te zeggen</li> <li>• Cliënt ziet tegen werkhervatting op, laat zich door werkhervattingproblemen volledig in beslag nemen, trekt zichzelf terug, piekert veel, ziet werkhervatting somber in</li> <li>• Cliënt stelt zich afhankelijk op voor het hervatten van werk, neemt geen initiatief om werk te hervatten, verwacht dat anderen initiatief tonen</li> <li>• Cliënt legt de verantwoordelijkheid voor zijn werkhervatting buiten zichzelf</li> </ul>
<p><b>2. MOEITE OM BEPERKINGEN TE ACCEPTEREN</b></p> <p><i>(Problemen m.b.t. de aanvaarding van de fysieke of psychische beperkingen die een handicap of ziekte met zich meebrengen)</i></p> <p><b><i>Heeft cliënt moeite om zijn ziekte en de beperkingen t.g.v. zijn ziekte te accepteren?</i></b></p>	<ul style="list-style-type: none"> <li>• Cliënt kan de problemen die de ziekte met zich mee brengt niet aan</li> <li>• Cliënt heeft met de beperkingen t.g.v. de ziekte niet leren leven</li> <li>• Cliënt heeft de beperkingen van de ziekte niet leren aanvaarden</li> <li>• Cliënt maakt de indruk dat hij de beperkingen t.g.v. de ziekte niet heeft geaccepteerd: heeft moeite om te praten over (de gevolgen van) zijn ziekte/is boos over het feit dat de ziekte hem overkomen is.</li> <li>• Cliënt denkt dat hij de beperkingen ten gevolge van zijn ziekte niet aan kan: cliënt</li> </ul>

	<p>heeft geen vertrouwen in zijn functioneren</p> <ul style="list-style-type: none"> <li>• Cliënt maakt de indruk dat zijn leven volledig in het teken staat van zijn ziekte</li> </ul>
<p><b>3. NEGATIEVE ZIEKTEPERCEPTIES</b></p> <p><i>(Negatieve, werkbelemmerende opvattingen van de cliënt over zijn ziekte)</i></p> <p><b>Heeft cliënt negatieve ziektepercepties die werkhervatting belemmeren?</b></p>	<ul style="list-style-type: none"> <li>• Cliënt vindt dat zijn ziekte zoveel invloed heeft op zijn leven dat werken niet mogelijk is</li> <li>• Cliënt maakt de indruk heel bezorgd te zijn over zijn ziekte</li> <li>• Cliënt verwacht weinig verbetering van de behandeling</li> <li>• De ziekte heeft negatieve invloed op de stemming van cliënt</li> <li>• Cliënt vindt dat hij pas kan gaan werken als de klachten verdwenen zijn</li> <li>• Cliënt vindt dat hij niet zou moeten hervatten omdat de klachten erger zijn geworden door zijn werk</li> <li>• Cliënt maakt de indruk meer gericht te zijn op zijn ziekte/zijn beperkingen dan op activiteiten die tot werkhervatting kunnen leiden</li> </ul>
<p><b>4. SECUNDAIRE ZIEKTEWINST</b></p> <p><i>(Het zoeken van externe voordelen van een bestaande ziekte)</i></p> <p><b>Wordt de re-integratie belemmerd door secundaire ziekte winst?</b></p>	<ul style="list-style-type: none"> <li>• Er zijn inconsistenties in de informatie afkomstig van het onderzoek en er zijn aanwijzingen dat externe voordelen een rol spelen in het in stand houden van de klachten: de geclaimde beperkingen staan niet in verhouding tot de ernst van de ziekte</li> <li>• Cliënt verwacht voordeel van het uitstellen van de re-integratie en maakt daardoor geen gebruik van de aangeboden re-integratiemogelijkheden terwijl hij/zij medisch gezien hiertoe wel in staat is</li> <li>• Cliënt heeft een schadeclaim lopen</li> </ul>

	<ul style="list-style-type: none"> <li>• Cliënt heeft de behandelaar gevraagd om te bemiddelen bij derden voor het verkrijgen van externe voordelen (bijvoorbeeld uitkering, voorzieningen, werk dispensatie, huisvesting, persoonsgebonden budget, enz.)</li> </ul>
<p><b>5. WERKBELEMNERENDE COGNITIES/GEDRAG</b></p> <p><i>(Cognities/gedrag die het re-integratieproces van de cliënt belemmeren)</i></p> <p><b>Heeft cliënt opvattingen/gedrag die werkhervatting belemmeren?</b></p>	<ul style="list-style-type: none"> <li>• Cliënt vindt dat zijn klachten erger worden als hij gaat werken</li> <li>• Cliënt vindt dat werken zijn gezondheid zou kunnen schaden</li> <li>• Cliënt vindt dat hij niet zou moeten werken met zijn huidige klachten</li> <li>• Cliënt vindt dat hij geen werk kan uitvoeren met zijn huidige klachten</li> <li>• Cliënt vindt dat hij niet kan werken totdat de klachten worden behandeld</li> <li>• Cliënt vindt dat rust essentieel is voor zijn genezing</li> </ul>
<p><b>6. ZIEKTEGEDRAG BEVORDERENDE ATTITUDE VAN DE BEHANDELAAR EN/OF INADEQUATE ADVIEZEN VAN DE BEHANDELAAR T.A.V. WERKHERVATTING</b></p> <p><i>(Adviezen van behandelaars die werkhervatting in de weg staan)</i></p> <p><b>Wordt de re-integratie belemmerd door negatieve adviezen van behandelaars?</b></p>	<ul style="list-style-type: none"> <li>• Cliënt heeft van de behandelaar het advies gekregen om zijn werk niet te hervatten totdat de klachten verminderd of verdwenen zijn</li> <li>• Cliënt heeft van de behandelaar het advies gekregen om zijn eigen werk niet meer te hervatten</li> <li>• Cliënt heeft van de behandelaar het advies gekregen om niet te gaan werken voordat de behandeling afgerond is</li> <li>• De behandelaar heeft rust geadviseerd, zonder nadere toelichting over reactivering of werkhervatting</li> </ul>

## BEVORDERENDE FACTOREN VOOR WERKHERVATTING

<p><b>1. POSITIEVE ATTITUDE T.A.V. WERKHERVATTING</b></p> <p><i>(Positieve houding van de cliënt t.o.v. re-integratie in eigen werk of in ander werk)</i></p> <p><b>Heeft cliënt een positieve houding t.a.v. werkhervatting?</b></p>	<ul style="list-style-type: none"> <li>• Het hebben van een baan is belangrijk voor cliënt: cliënt heeft afgelopen zes maanden geprobeerd te hervatten/heeft gesolliciteerd/cliënt heeft een actieve houding: zoekt informatie, neemt contact op met re-integratie begeleiders, werkgever, bedrijfsarts, etc.</li> <li>• Werk betekent veel voor cliënt (behalve inkomen): cliënt verricht andere activiteiten die tot werkhervatting kunnen leiden (opleiding, stage, werkervaringsplaats, etc)</li> <li>• Cliënt acht het waarschijnlijk te kunnen hervatten: cliënt is redelijk positief over werkhervatting</li> <li>• Cliënt is ervan overtuigd dat hij (in eigen of in ander werk) kan hervatten: cliënt heeft heel veel vertrouwen dat hij kan hervatten</li> </ul>
<p><b>2. BEGELEIDING TAV WERKHERVATTING ZO SNEL MOGELIJK STARTEN</b></p> <p><i>(Het starten van re-integratieactiviteiten zodra de gezondheid van de cliënt het toelaat)</i></p> <p><b>Zijn er adequate re-integratie activiteiten ondernomen om werkhervatting te bespoedigen?</b></p>	<ul style="list-style-type: none"> <li>• Het re-integratietraject verloopt adequaat en werkhervatting is in zicht</li> <li>• Cliënt heeft voldoende gebruik gemaakt van de re-integratiemogelijkheden</li> <li>• Cliënt heeft vroegtijdig gesprekken gehad met re-integratie adviseurs</li> <li>• Reactivering is vroegtijdig gestart en vindt stapsgewijze plaats</li> </ul>
<p><b>3. MOTIVATIE T.A.V. WERKHERVATTING</b></p> <p><i>(gedrag, opvattingen of acties van de cliënt gericht op re-integratie)</i></p>	<ul style="list-style-type: none"> <li>• Cliënt heeft in de afgelopen zes maanden activiteiten ondernomen gericht op werkhervatting (bijv. gesprekken met bedrijfsarts, re-integratiebegeleider, jobcoach, opleiding/cursus gevolgd, etc)</li> </ul>

<p><b><i>Is cliënt gemotiveerd om te hervatten?</i></b></p>	<ul style="list-style-type: none"><li>• Cliënt is van plan om de komende maanden te hervatten/naar werk te gaan zoeken</li><li>• Cliënt is bereid om concessies te doen om weer te gaan werken (andere functie, langere reistijden, lagere functie, minder salaris, etc )</li><li>• Cliënt geeft aan zijn werk erg te missen</li></ul>
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2. Dekkers-Sánchez PM, Wind H, Sluiter JK, Frings-Dresen MHW (2010) A qualitative study of perpetuating factors for long term sick leave and promoting factors for return to work: chronic work disabled patients in their own words. *J Rehabil Med* 42:544-552
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4. Dekkers-Sánchez PM, Wind H, Sluiter JK, Frings-Dresen MHW (2012) What factors are most relevant to the assessment of work ability of employees on long-term sick leave? The physicians' perspective. *Int Arch Occup Environ Health* 1-10
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11. Warr P (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being: Work involvement scale. Journal of Occupational Psychology 52: 129-148.

## **Publications**

Dekkers-Sánchez PM, Hoving JL, Sluiter JK, Frings-Dresen, H.W.M. Factors associated with long term sick leave in sick listed employees: a systematic review. *Occup Environ Med* 2008; 65:153-157.

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Dekkers-Sánchez PM, Wind H, Sluiter JK, Frings-Dresen MHW. What promotes RTW of long term sick listed employees? The views of vocational rehabilitational professionals. *Scand J Work Environ Health* 2011; 37:481-93.

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Dekkers-Sánchez PM, Wind H, Frings-Dresen MHW, Sluiter JK. Successful implementation of an instrument to assess factors relevant for work ability assessments of employees on long term sick leave. Under review.

**Other Publications**

Dekkers-Sánchez PM, Wind H, Sluiter JK, Frings-Dresen MHW. Wat bevordert duurzame werkhervatting van langdurig zieke werknemers? Tijdschrift voor Bedrijfs- en Verzekeringsgeneeskunde 2012, 20 (4): 179-180.

Dijk FJH van, Dekkers Sánchez P, Zweerman G, Braam I et al. ¿Cómo buscar la evidencia en las fuentes de internet?. Amsterdam: Coronel Institute of Occupational Health, Academic Medical Center, 2011.

Dekkers-Sánchez PM. Effect van cognitieve gedragstherapie en graded exercise therapy op werkhervatting bij arbeidsongeschikten met chronisch vermoeidheidssyndroom. Tijdschrift voor Bedrijfs- en Verzekeringsgeneeskunde 2008;16:106-107.

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**PhD Portfolio**

Name: Patricia M. Dekkers-Sánchez Mendoza  
 PhD period: March 2006- May 2013 (60%)  
 PhD supervisor: Prof. M.H.W. Frings-Dresen  
 Department: Coronel Institute of Occupational Health,  
 Academic Medical Center

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<b>Workload ECTS</b>	50
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**1.PhD Training****Year**


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**General courses AMC Graduate School**

- The AMC World of Science	2006	2
- Scientific Writing in English for Publication	2006	1.5
- Oral Presentation in English	2006	0.5
- Expert Management of Medical Literature	2006	1.5
- Project Management	2007	1
- Systematic reviews	2007	0.5
- Reference manager	2008	0.5
- Evidence-Based Searching	2008	2
- Web of Science	2008	0.5
- Better Use of PubMed	2008	0.5

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**Specific courses**

- Expert course Evidence Based Medicine, Netherlands School of Public Health	2007	2
- Evidence Based Medicine in de Klinische Praktijk, Cochrane Dutch Centre	2007	2
- Clinical Epidemiology, AMC Graduate School	2008	2
- Advanced Topics in Clinical Epidemiology, AMC Graduate School	2008	2
- Epidemiologisch onderzoek: opzet en interpretatie EMGO Instituut	2009	3
- Practical Biostatistics, AMC Graduate School	2010	2
- Qualitative Health Research, AMC Graduate School	2010	3
- Oral Presentation Techniques	2011	2

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**International courses**

- Doctoral School in Disability Research, Paris, France.	2012	5
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**Presentations**

- Oral presentation "Most relevant factors in the assessment of work ability of employees on long term sick leave" EUMASS congress, Padova, Italy.	2012	1.5
- Oral presentation "Influenceable promoting factors for RTW: views of Dutch vocational rehabilitation professionals". EUMASS congress, Berlin, Germany.	2010	1.5
- Poster presentation "Most relevant factors for RTW the views of Insurance physicians". Congress Occupational Health.	2011	0.5
- Poster presentation. "Relevant factors for RTW according insurance doctors". Congress Occupational Health	2010	0.5

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- Poster presentation. "Most relevant factors for RTW the views of Insurance physicians". Muntendam symposium	2009	0.5
- Poster presentation "Influenceable promoting factors for sustained RTW and crucial aspects of RTW-interventions" Congress on Insurance medicine.	2008-2012	4
- Poster presentation "Factors that hinder RTW by long term sick listed employees: the patients' perspective". International Congress on Insurance Medicine.		
- Poster/oral presentations UWV Symposia.		

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## 2. Teaching

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		<b>Year</b>
<b>Tutoring, Mentoring</b>		
- Junior internships, 2 <sup>nd</sup> year medical students	1	2013
- Junior internships, 2 <sup>nd</sup> year medical students.	1	2012
- Tutor Research paper on occupational medicine, 3rd year medical students.	1	2011
- Tutor practicum Occupational Medicine, 3 <sup>rd</sup> year medical students.	1	2011
- Tutor work Group Occupational Medicine, 2 <sup>nd</sup> year medical students.	2	2010
- Tutor work group Occupational Medicine, 3rd year medical students.	1	2009
		2008

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## Chapter 8

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