Disease oriented work ability assessment in social insurance medicine
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Summary
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Chapter 1

Work ability assessment of employees who are sick-listed for a minimum of 21 months is an important task of Dutch IPs. It is also a complex task because work ability is determined by many factors. To accomplish this task, IPs gather all sorts of information. Disease-specific protocols conceptualise work participation according to the ICF model and assist IPs with information gathering. Work ability assessment implies the identification of information that predicts durable participation in work. The existing protocols are not sufficient in helping IPs to select the relevant information on which durable participation in work can be assessed.

Different IPs should comparably rate the work ability of the same long-term sick-listed employee. Past studies presume that there is substantial variation between IPs in work ability assessments. To reduce variation of work ability assessments among IPs, it can be assumed that IPs should focus on the same relevant aspects and/or aspects they collectively think are relevant. Until now, scientific evidence on those aspects is, to a great extent, missing. Identification of those aspects of work ability and the development of instruments are real needs.

The objectives of this thesis were: (1) to identify aspects of work ability that are relevant for the assessment of work ability in patients with varying diseases, including Myocardial Infarction (MI), chronic Low Back Pain (cLBP) and Major Depressive Disorder (MDD) according to literature on return to work (RTW) and based on the opinion of Insurance Physicians (IPs) or patients; and (2) to test if the use of identified aspects will change variation in work ability assessment by IPs.

To begin the development of evidence, the following four research questions concerning diseases for which disability pensions are frequently granted were formulated:

1. What prognostic factors for return to work have been described in the literature for the three diseases in the Netherlands for which a disability pension is frequently granted: MI, cLBP and MDD?
2. According to IPs, what are relevant aspects of work ability in cases of long-term sick-listed employees with musculoskeletal diseases, psychiatric diseases with a specific emphasis regarding MDD, and other diseases?
3. According to sick-listed survivors of an acute coronary syndrome, what are the facilitating and hindering factors to return to work?
4. Does variation in work ability assessment change when disease-specific aspects for work ability are used in the assessment of sick-listed patients with MDD?
The results of the studies performed to answer the questions are presented in Chapters 2 through 6. The considerations, implications for future research and recommendations are all discussed in Chapter 7.

Chapter 2

The first research question is addressed in Chapter 2. The aim of the study in this chapter was to identify prognostic factors for work ability in sick-listed employees with myocardial infarction (MI), (cLBP) and (MDD). These factors were identified in order to establish an objective basis for work ability evaluation. A Systematic literature search in the PubMed database (January 1, 1990, to July 1, 2006) with the Yale prognostic research filter was performed. Inclusion criteria were: (1) work-disabled employees; (2) MI, cLBP or MDD patients; (3) longitudinal designs; and (4) return to work or compensation status as an outcome measure. From this search, it appeared that four studies on MI met the inclusion criteria and described the following prognostic factors for faster return to work in the acute phase of the disease and disablement: low age; male gender; no financial basis on which to retire; low physical job demands; few somatic complaints; no anxiety attacks; no diabetes; no heart failure; no atrial fibrillation; no Q waves; and a short time interval between MI and presentation at the occupational medicine clinic. Two studies on cLBP met the inclusion criteria and described the following prognostic factors for faster return to work after three months of work disablement: low age; male gender; no treatment before sick listing; surgery in the first year of sick listing; being a breadwinner; less pain; good general health; high job satisfaction; low physical and/or psychological demands at work; and a higher decision latitude at work. No relevant MDD studies were found.

It was concluded that only a few studies describe disease-specific, environmental and personal prognostic factors for returning to work in the earlier phases of work disablement in MI and cLBP patients. No study describes prognostic factors for MDD. Almost no relevant studies have been reported in patients who have been long-term sick-listed.
Chapter 3

In Chapter 3 the second research question was addressed. The purpose of the study performed was to describe what aspects, as categorised according to the ICF model, insurance physicians (IPs) take into account in assessing short-term and long-term work ability in cases of long-term sick-listed employees with musculoskeletal diseases, psychiatric diseases and other diseases. These aspects were investigated with a telephonic survey on a random sample of 60 IPs from the Dutch National Institute for Employee Benefit Schemes, stratified by both region and years of experience. It appeared that, in determining work ability, a wide range of aspects were employed by IPs. In the case of musculoskeletal disease, 75% of the IPs considered the functions and structures important. With psychiatric and other diseases, however, participation was considered important by 85% and 80%, respectively. Aspects relating to the environmental factor and personal factor components were mentioned as important by fewer than 25% of all IPs. In assessing the short-term and long-term prognosis of work ability, the disease aspects were primarily used, with a rate of over 75%. It was concluded that, in determining work ability, IPs predominantly considered aspects relating to the functions and structures and participation components of the ICF model as important. The environmental factor and personal factor components were not as frequently mentioned. In assessing the short-term and long-term prognosis of work ability, the disease or disorder component was predominantly used. It can be argued that environmental factors and personal factors should also be used more often in assessing work ability.

Chapter 4

In Chapter 4, the third research question was addressed. In this chapter, the time perspective of returning to work and factors that facilitate and hinder returning to work in a group of survivors of acute coronary syndrome (ACS) were described. In addition, differences in patients with ST-segment elevation myocardial infarction (STEMI) versus non-ST-segment elevation myocardial infarction or Unstable Angina (NSTEMI/UA) were explored. A semi-structured telephone survey occurring 2-3 years after hospitalisation with 84 employed Dutch ACS-patients from 1 academic medical hospital was performed. In total, 49 patients (58%) returned to work within 3 months, whereas at least 74 (88%) returned at least once within 2 years after the event. Two years after hospitalisation, 30
(36%) patients were not working at their pre-ACS levels. On average, NSTEMI/UA patients returned to work 2.7 months sooner than STEMI patients. For all ACS-patients, the most frequently mentioned categories of facilitating factors to return to work were not having signs or symptoms of heart disease and no illness perception. Physical incapacity, co-morbidity, and mental incapacity were the top three categories of hindering factors. It was concluded that within 2 years, 10 (12%) ACS patients had not returned to work at least once, and 20 (24%) were not working at pre-ACS levels. Disease factors, functional factors, environmental factors, and personal factors were listed as affecting a subject’s work ability level.

Chapter 5

In Chapter 5, the second research question was specifically focused on MDD. MDD is the disease that is most frequently granted long-term disability pensions. This chapter describes the development of a practical set of aspects of work ability to be used when assessing work ability of employees who are sick-listed with MDD. In an expert brainstorming session, IPs first identified the specific abilities that were thought to be associated with work ability in long-term sick-listed employees with MDD that could also be associated with the items of the Hamilton Rating Scale for Depression. Then, 64 insurance physicians (IPs) were selected to participate in a 2-round Delphi study. The aim of the first Delphi round was to identify the abilities that were thought to be important by at least 80% of the IPs. In the second Delphi round, the abilities ranked in the top 10 by at least 55% of the IPs were identified as being the most important items.

In total, 61 IPs participated in the 2 Delphi rounds. The most important abilities in a work ability evaluation for sick-listed employees with MDD were to take notice, to sustain attention, to focus attention, to complete operations, to think in a goal-directed manner, to remember, to perform routine operations, to undertake structured work activities, and to recall and to perform autonomously. According to 55% of the IPs, there were 10 important aspects of work ability that have to be considered in a work ability evaluation of long-term sick-listed employees with MDD.
Chapter 6

In Chapter 6, the fourth research question was addressed. The purpose of study in this chapter was to assess the mean score and variation of work ability provided by Dutch IPs in five different real case history vignettes of long-term, sick-listed employees with MDD. This was assessed with and without the aid of a checklist that was described previously in Chapter 4. In a post-test-only randomised experiment, 25 IPs assessed work ability for 5 cases on a scale of 0 to 100 without the use of the checklist, while 21 IPs used the checklist. Differences between the groups in the mean and absolute variation of assessments were tested with independent t-tests. Intra Class Correlation (ICC) analysis was used to determine if IPs could distinguish between the vignettes.

When using the checklist, the mean work ability score of all vignettes was 3 to 12 points higher in comparison when the checklist was not used. There was no difference in variation of work ability scores per vignette and between groups. The ICC was 0.64 for both groups. It was concluded that use of the checklist increased the mean score of work ability but had no effect on its variation.

Chapter 7

It is concluded that, for sick-listed employees with MI or cLBP, prognostic factors exist in which return to work can be predicted. When work ability was assessed for long-term sick-listed employees with MI and cLBP, it should be understood that there were probably factors that determined work ability 21 months after the employee was sick-listed other than the identified prognostic factors for RTW in MI and cLBP clients. In the perspective of IPs, work ability was based in ICF terms on the kind of disease of the employee, on the functional and structural qualities of the employee, and on participation possibilities of the employee. The perspective of clients' personal aspects, such as motivation and environmental factors (e.g. work demands), can also be important for the possibility to participate in work.

In assessments of work ability of long-term sick-listed MDD employees, the variation in assessments among IPs is wide, irrespective of the use of an experimental list of aspects of work ability. Further development of the checklist for MDD clients is needed. The use of the checklist result in higher work ability assessments in comparison when the checklist was not used. It is not recommended to solely use the checklist to assess...
work ability, but to collect information from other professionals concerned with the
work ability of the client. Further, it is recommended that training and educating of IPs to
assess work ability is necessary and that the use of prognostic factors and the checklist in
work ability assessments must be demonstrated in the form of illustrative case histories.