

Occupational Rehabilitation

# Studies and Research Projects

REPORT R-743



## Development of an Instrument for Evaluating the Factors Influencing Long-Term Sick Leave Attributable to Mental Health Problems

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## ABSTRACT

**Introduction:** Considerable evidence shows a major increase in mental health problems in Canada and Québec. The latest scientific knowledge suggests that work disabilities resulting from mental disorders are multifactorial in nature. Yet there is no instrument available in current clinical practice for systematically evaluating all these factors in the context of a progressive return to work. The purpose of this study is therefore to identify and evaluate the factors that influence the duration of sick leave and hinder the return to work. It constitutes a first step in the development of an evaluation instrument designed to systematically integrate all these factors into the initial interview with workers on sick leave due to a mental health problem.

**Objectives:** The general objective of this study was to develop an evaluation instrument that would identify the factors influencing the long-term work absence and the return to work (RTW) of persons on extended sick leave due to mental health problems. The specific objectives were (1) to identify the factors influencing the long-term work absence and RTW, (2) to develop a preliminary version of the instrument, and (3) to conduct a pilot study.

**Method:** Three steps were carried out to achieve the general objective. First, the factors influencing the long-term work absence and return to work of individuals with mental health problems were identified. This involved carrying out a literature review and conducting individual interviews of workers who had experienced a long-term work absence due to a mental health problem, as well as of clinicians experienced in the work rehabilitation field and supervisors/managers responsible for the RTW of such workers.

Second, a preliminary version of the instrument was developed by adapting an existing tool pertaining to the factors influencing the long-term work absence and RTW of individuals with musculoskeletal disorders (MSDs) and by incorporating the findings of the first step into this tool. Mental health experts were also consulted to identify any additional instruments that should be used to support the diagnostic impressions and the assessment of the level of functioning of the person being evaluated. The preliminary version of the instrument was then pre-tested with clinicians to ensure item clarity.

Lastly, a pilot study was carried out with clinicians to identify the factors hindering and facilitating use of the instrument. Content analysis of the one-on-one interviews of the clinicians led to the development of a final version of the instrument.

**Results:** Using the results obtained, 47 factors were identified and divided into four main categories: sociodemographic, clinical, occupational, and insurance-related. These factors were then incorporated into an interview guide entitled the Work Disability Diagnostic Interview (WoDDI). In addition, based on experts' opinions, three questionnaires that can be used to support the diagnostic impressions and the workers' level of functioning were selected. These were the Structured Clinical Interview for the DSM-IV (SCID-I), the Global Assessment of Functioning (GAF), and the French version of the *Job Content Questionnaire*. Lastly, based on the pre-test and pilot study, the content and form of the instrument were adapted to suit the clinician-users in question.

**Conclusion:** This study represents a first in that it targets the factors influencing the long-term work absence and RTW of individuals with mental health problems. It shows that workers' perceptions and representations, as well as organizational, work environment, and insurance-related factors, act together to facilitate or hinder the RTW of such workers. An instrument was consequently developed for the clinicians involved in order to facilitate systematic screening for these factors. Additional studies will be needed in the years ahead to validate this instrument.

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## 1. INTRODUCTION

In the past few years, mental health problems (MHPs) have been identified as one of the major causes of sick leave (Nystuen, Hagen, & Herrin, 2001; St-Arnaud, Saint-Jean, & Rhéaume, 2003). According to Nieuwenhuijsen et al. (2003), MHPs that result in sick leave can be divided into three categories: (1) adjustment disorders, (2) mood disorders (major depression), and (3) anxiety disorders (generalized anxiety disorder, panic disorder with or without agoraphobia).

MHP-related absences from work have considerable economic impact. The International Labour Organization (1993) estimated that sick leave due to MHPs costs the United States alone a total of US\$200 billion every year. In the United Kingdom, approximately 40 million working days are lost each year due to these disorders (Cox, 2000). Considerable data also shows that MHPs are on the rise in the workplace (Dewa, Lesage, Goering, & Caveen, 2004; Webster & Bergman, 1999). In Québec, 30% to 50% of work absences for long-term disability (more than six months) appear to be attributable to MHPs (Ranno, 2000). Various disability insurance companies in other countries report an identical prevalence rate regarding compensation for work absences resulting from MHPs such as depression and adjustment disorders (Gabriel & Liimatainen, 2000). Such long-term sick leave can lead to a worker's isolation, anxiety stemming from apprehensions about the RTW and about co-workers' reactions, and loss of confidence in both his<sup>1</sup> abilities and his identity as a worker, to the point where he is no longer able to see himself as a potential worker (Bilsker, Wiseman, & Gilbert, 2006).

At present, it is difficult to establish, with any precision, the incidence and prevalence of the three categories of MHPs in any given working population because of the variability of methods used in the different studies (Antony & Swinson, 1996; Blazer, Kessler, McGonagle, & Swartz, 1994; Lépine, 2002). Generally speaking, the lifetime prevalence of major depression in a working population ranges between 15% and 20% (Blazer et al., 1994; Liu & Van Liew, 2003; Marcotte, Wilcox-Gok, & Redmon, 1999). The lifetime prevalence of anxiety disorders, including all diagnoses, appears to be slightly higher than that of major depressive illnesses, specifically, from 20% to 25% (Kessler et al., 1994; Leon, Portera, & Weissman, 1995; Norton & Hope, 2005; Pélioso et al., 2002; Waghorn & Chant, 2005). The American Psychiatric Association (1994) estimates that the prevalence of adjustment disorders ranges from 5% to 20% in the general population. However, Casey et al. (2001) point out that it is difficult to estimate the prevalence, as the diagnosis of adjustment disorder is not taken into account in most studies on the prevalence of mental disorders. Some authors assert that more than 50% of the individuals off work due to a mental disorder have an adjustment disorder diagnosis (Nieuwenhuijsen et al., 2003; van der Klink & van Dijk, 2003). The duration of the sick leave frequently exceeds the period of time estimated for regaining health. For example, approximately 20% to 27% of people with an adjustment disorder remain off work for more than one year, whereas the symptoms of this disorder generally go away within a few months (Nieuwenhuijsen et al., 2003; Shear, Frank,

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1. The masculine gender is used throughout this document solely to facilitate reading and has no discriminatory intent.

Houck, & Reynolds, 2005; van der Klink & van Dijk, 2003). Regarding major depression, a clinical improvement is observed after six to 12 months of treatment (Echeburúa, Salaberria, de Corral, Cenea, & Berasategui, 2006). In summary, although it appears that mental health problems are significantly present in the industrialized countries, their prevalence and the duration of the related sick leave have not yet been estimated accurately in any given working population.

To date, the main emphasis has been on primary prevention or on the reintegration or retention on the job of individuals with serious mental disorders. Yet there is growing recognition that a given mental disorder will not necessarily have the same consequences in different workers, that symptom resolution does not automatically lead to a resumption of occupational activities, and that multiple factors play a role in long-term sick leave attributable to a mental disorder (Blank, Peters, Pickvance, Wilford, & MacDonald, 2008; Goldner et al., 2004; Nieuwenhuijsen, 2004; Nieuwenhuijsen, Verbeek, de Boer, Blonk, & van Dijk, 2006; Pluta & Accordino, 2006; Schultz & Gatchel, 2008; van der Klink & van Dijk, 2003; Wilford et al., 2008; Zimmerman et al., 2006). It is therefore important to develop interventions that will promote the RTW of persons with MHPs. One of the first steps in such interventions is that of carrying out an initial evaluation to identify all the factors possibly influencing long-term sick leave and RTW. Based on the results obtained, a personalized plan can then be developed to address specific intervention targets in order of priority and ultimately to facilitate the RTW of individuals with MHPs. This practice of developing a personalized plan is found in the field of occupational rehabilitation for individuals with MSDs and appears to have a positive impact on their RTW (Durand, Loisel, Hong, & Charpentier, 2002; Marois & Durand, 2009). However, to our knowledge, there is no instrument currently available to help clinicians evaluate all the contributing factors in individuals with MHPs. This study sought to fill this gap by developing such an instrument for clinicians.

## 2. CURRENT KNOWLEDGE

To the best of our knowledge, few studies have focussed specifically on the factors influencing the RTW in individuals with MHPs (Millward, Lutte, & Purvis, 2005; Nieuwenhuijsen et al., 2006; Shiels, Gabbay, & Ford, 2004). Rather, emphasis is most often placed on the illness itself and on symptom reduction. However, apart from treating the symptoms, other factors appear to affect the resumption of occupational activities by individuals suffering from depression. This premise is supported by the research done by Anthony and Jansen (1984) and St-Arnaud et al. (2004), who state that there is little or no relationship between the symptoms presented by individuals with MHPs and their functional capacities or work capabilities. In other words, symptom resolution does not automatically lead to resumption of occupational activities (Goldner et al., 2004; Mintz, Mintz, Arruda, & Hwang, 1992; Nieuwenhuijsen, 2004; van der Klink & van Dijk, 2003). Conversely, a RTW does not guarantee complete recovery (St-Arnaud et al., 2003). Recent scientific knowledge therefore suggests that the disabilities caused by mental disorders are multifactorial in nature (Nieuwenhuijsen et al., 2006; Pluta & Accordino, 2006; Simon et al., 2000; van der Klink & van Dijk, 2003). These factors can be divided into three categories:

- 1) Factors related to the worker's personal characteristics (e.g. age, sex, severity of illness symptoms, duration of the absence, self-esteem, motivation, perception of functional capacities, number of episodes of sick leave, and identification with the role of sick person) (Dewa et al., 2003; Elinson, Houck, Marcus, & Pincus, 2004; Henderson, Glozier, & Elliott, 2005; Miller, 2004; Millet & Sandberg, 2003; Millward et al., 2005; Nieuwenhuijsen et al., 2006; Rytsala et al., 2005; St-Arnaud et al., 2004);
- 2) Factors related to the work environment and work activity (e.g. supervisor's attitude, support from the workplace, absence related to a problem at work, interactions between the partners involved in managing the health problem, work overload, job demands that exceed the individual's capacities) (Freeman, Cromwell, Aarenau, Hazelton, & Lapointe, 2004; Nieuwenhuijsen, 2004; Nieuwenhuijsen et al., 2003; Nieuwenhuijsen et al., 2006; St-Arnaud, Bourbonnais, Saint-Jean, & Rhéaume, 2007; St-Arnaud et al., 2003; St-Arnaud et al., 2004);
- 3) Factors related to the health care and disability management systems (e.g. policies of the health care system, early management, duration of insurance coverage, compensation policies) (Blank et al., 2008; Dewa et al., 2003; Henderson et al., 2005; Pluta & Accordino, 2006; Salkever, Shinogle, & Goldman, 2003; St-Arnaud et al., 2004).

To date, either little has been written about the specific impact of each of these factors on the RTW or the writing is very fragmentary (Millward et al., 2005; Nieuwenhuijsen, 2004). Moreover, in current clinical practice, there is no systematic approach or conceptual framework that evaluates all these factors in the context of a progressive return to work (St-Arnaud et al., 2004). The evaluation instruments currently available and used in the field focus primarily on evaluating workers' functional capacities (Plante, 2006). For example, instruments such as the

“Perceive: Recall: Plan: Perform (PRPP) System of Task Analysis” (Chapparo & Ranka, 1997), the “Assessment of Motor and Process Skills” (Fischer, 1995), the “Canadian Occupational Performance Measure” (Carswell et al., 1996), and the “Global Assessment of Functioning Scale (GAF)” (Spitzer, Gibbon, & Endicott, 2000) target the workers’ physical, cognitive, affective, and perceptual capacities with little regard for their work tasks or work environment. Other evaluation instruments, such as the “Worker Role Interview” (Veloza, Kielhofner, & Fisher, 1998), the “Obstacles to Return-to-Work Questionnaire” (Marhold, Linton, & Melin, 2002), and the “Work Environment Survey” (Dick & Shepherd, 1994) focus on workers’ perceptions of the psychosocial and environmental variables that could have an impact on their ability to return to work (Plante, 2006). Again, the psychometric properties of these instruments remain poorly documented as regards a clientele with MHPs. Nor do they take into account the interaction among the person- and environment-related variables. To our knowledge, there is no evaluation instrument that identifies all the factors that explain the work disability situation of persons on sick leave due to MHPs (including adjustment disorders, major depression, generalized anxiety disorder, and panic disorder with or without agoraphobia). This study attempts to fill this gap.

### **3. OBJECTIVES**

The general objective of this project was to develop an instrument for identifying and evaluating the factors influencing long-term sick leave and the return to work in individuals with MHPs. The instrument and its structure were developed in a manner similar to that described in Durand et al. (2002). This instrument is designed both for researchers and for clinicians involved in RTW interventions. The specific objectives pursued were as follows:

1. Identify the factors influencing long-term sick leave and RTW in workers with MHPs, based on the scientific literature and experiential knowledge;
2. Develop a preliminary version of the instrument;
3. Conduct a pilot project that involves using the instrument with the target population.



## 4. CONCEPTUAL FRAMEWORK

Two conceptual frameworks were used in this research project. The first was the Disability Creation Process (DCP) developed by the Review Committee of the Québec Classification Proposition (INDCP, or International Network on the Disability Creation Process) (Fougeyrollas, Bergeron, Cloutier, Côté, & St Michel, 1998). In this framework, the concept of disability is broadened to the concept of “disability situation.” The DCP conceptual framework defines the disability situation, according to which the development or not of a “life habit,” i.e. a common activity or a social role that assures the survival and fulfillment of a person in society throughout his lifetime, is the result of the interaction between the impairment of the person’s organic systems and aptitudes (abilities and inabilities) on the one hand, and environmental factors on the other (Fougeyrollas, Cloutier, Bergeron, Côté, & St-Michel, 1998). From this perspective, the disability is determined by comparing an individual’s functional incapacity with the situations encountered in daily life. By relating it to day-to-day life, this framework defines the disability in terms of the situations that the person encounters. A distinction must be made between macro-situations such as pursuing an occupation or going to school, and micro-situations such as going up stairs, turning a handle, or pressing a button. Thus, disabilities are no longer seen as confined strictly to people with disabilities, but as applying to the population at large, in the sense that each and every person is likely to be faced with situational handicaps (Hamonet, 1990; Minaire, 1992). As explained by Minaire (1983), “seen thus, the situational handicap is not a constant, but a variable that is dependent on the social situations experienced by the subject” [translation]. The emphasis is placed on the disability-generating situation, not on the person with an abnormality. However illuminating this framework may be with respect to the components of disability situations in the workplace, it remains general and therefore not specific to individuals with mental health problems.

Complementing this framework is a second model, which also served as a basis for this research project, namely, the “Modèle de la dynamique des facteurs impliqués dans le processus de désinsertion et de réinsertion professionnelle” [model of the dynamics among the factors involved in occupational exclusion and reintegration] (St-Arnaud et al., 2003; St-Arnaud et al., 2004). This model defines and categorizes certain personal and environmental factors influencing the RTW of persons on sick leave due to MHPs. The categories concern (1) the personal and organizational factors that play a role in the phenomenon, (2) the role of the actors involved in the medical/administrative management of the absence, (3) the factors influencing the worker’s expectations of the RTW and the conditions of the RTW, and lastly, (4) the support conditions provided in the workplace that facilitate or prevent the reintegration or retention of workers in the workplace. The possibility of a progressive return to work, of making changes to the conditions that contributed to the worker’s departure from the workplace, and of benefiting from a warm reception and support from co-workers and superiors are some of the factors conducive to a successful RTW and employment retention.

These two conceptual frameworks are therefore complementary in nature. A hybrid version of the two provided a basis for developing an instrument designed to evaluate the factors influencing long-term absenteeism and the RTW.



## 5. METHODS AND RESULTS

The three specific objectives of this study were attained using a “development” approach as defined by Contandriopoulos et al. (1990), i.e. a research strategy aimed at developing a new intervention, improving an existing intervention, or developing or refining an instrument through the systematic use of existing knowledge (Contandriopoulos et al., 1990).

### 5.1 Objective 1: Identify the factors influencing the long-term absence and return to work of workers with MHPs

The objective here was to identify the factors influencing the long-term absence and return to work of workers with MHPs, based on both data found in the literature and experiential data.

#### 5.1.1 Methods

As mentioned earlier, the method used was based on the process described in an article by Durand et al. (2002). First, the factors contributing to long-term absence and to the different dimensions of the work disability situation were identified using a variety of data sources and adapted methods.

The first source was the scientific literature. A systematic review was conducted of the literature and the articles identified were analyzed. This process involved an initial selection of articles by two members of the research team. These two independent reviewers based their selection on the titles' correspondence to the following inclusion criteria: the focus of the study had to include returns to work and long-term absences caused by an acute (or common) mental disorder. The literature search combined key words related to (1) mental health problems (*mental disorders, affective disorders, depression, anxiety, mental illness, adjustment disorders, burnout*) and (2) the return-to-work process (*return to work, workplace integration, work absence, employee absenteeism, professional reintegration, job re-entry, re-entry in labour force, reemployment*). The following databases were consulted: *Academic Search Complete, Medline, Psychological and Behavioral Sciences Collection, PsycInfo, Current Contents* and *Repères*. The period from 1994 to 2009 was covered to ensure correspondence with the diagnostic criteria of the DSM-IV, which remained unchanged in the updated DSM-IV-TR (American Psychiatric Association, 2000). Irrespective of the research design, the studies retained used both quantitative and qualitative methods. Studies concerned with primary prevention of mental health problems in the workplace and with the integration of individuals with serious mental disorders were excluded. Similarly, studies evaluating rehabilitation programs were excluded. The titles were then classified in three categories: (A) unrelated to the topic; (B) related to the topic; and (C) impossible to determine. For categories B and C, the abstracts were consulted and a second selection was made by the two reviewers. The remaining titles were again divided into categories A, B, and C. Where there was doubt or disagreement between the two reviewers regarding the inclusion or exclusion of the articles in category C, the articles were ordered and analyzed to allow for a final decision. After this article selection process, content analysis was performed. An analysis grid was designed for the purpose of systematically documenting the

objective of the article, characteristics of the research team, method used, study population, and results obtained. All the articles retained were analyzed independently by two reviewers and their results then compared. In the case of disagreement, the results were discussed again until a consensus was reached, and if needed, a third reviewer's opinion was sought. In total, a sample of 36 references was selected out of the initial 1,201 references identified. Two reviewers read this reduced number of articles to determine whether they would be included or excluded. This analysis resulted in the retention of 21 articles directly related to the topic.

The second source of data consisted of various key informants involved in the return-to-work process. First, a number of experienced clinicians working in Québec were recruited using the snowball sampling technique, i.e. a first clinician was contacted and then asked to identify other clinicians who might meet the selection criteria. The inclusion criteria were as follows: being a physician, psychologist, or occupational therapist practising in the field of work rehabilitation with a clientele comprising 50% or more individuals on sick leave for the first time due to an MHP (i.e. adjustment disorder, major depression, generalized anxiety disorder, or panic disorder with or without agoraphobia, as defined in the DSM-IV-TR). A total of nine clinicians were interviewed, including three men and six women. Of these, three were psychologists, two were psychiatrists, and four were occupational therapists. They were all working in the occupational rehabilitation field and had from two to 25 years' experience, with an average of seven years. However, one of the psychologists with 15 years' experience was excluded after the interview because new information received during that time showed that the study inclusion criteria were not fully met. More specifically, the clientele served by this clinician came from an employee assistance program, and the workers were not always on sick leave or had not been off work for more than three months.

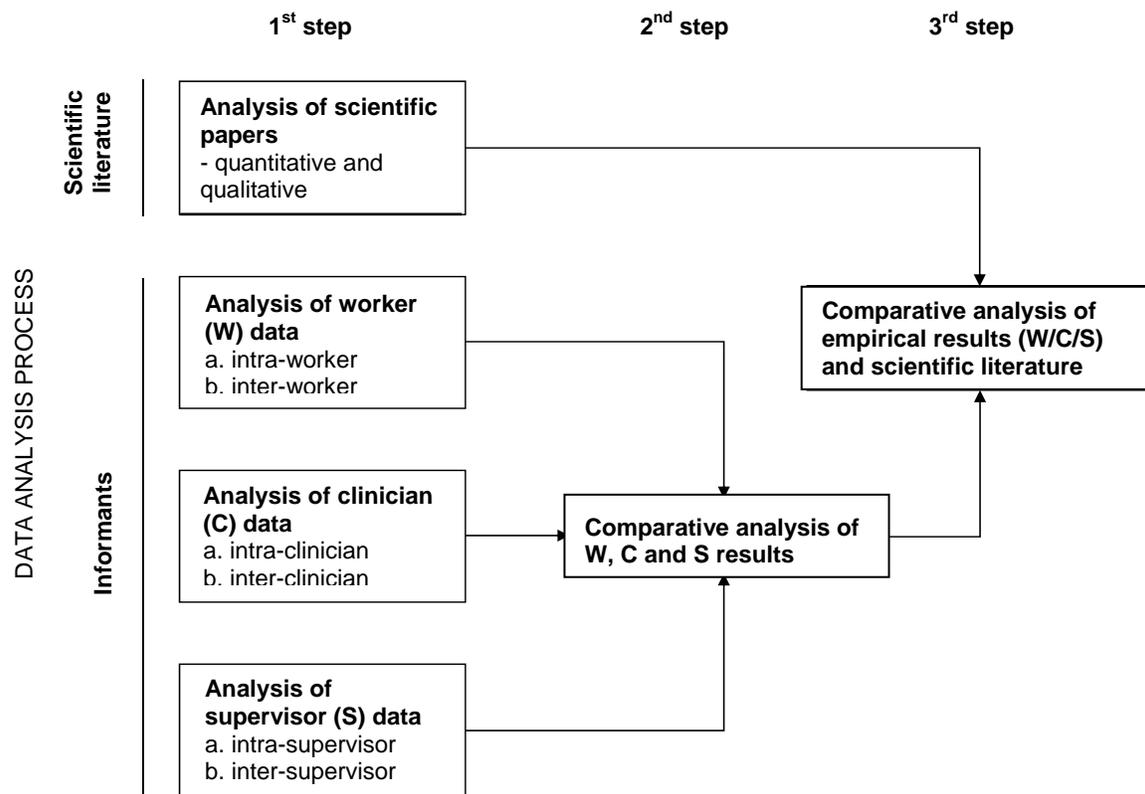
Workers were also interviewed. They had to have been off work for more than three months for a first episode of an MHP in the year prior to data collection. They also had to have returned to work for a period of at least one month, and either stayed on the job or gone on subsequent sick leave. The participants were recruited through clinicians working with this clientele in the occupational rehabilitation field. In other words, the sampling was done through key informants. Seven workers were recruited and interviewed (five women and two men). They had all experienced a first sick leave for an MHP. The average time they had been off work was one year and they had all participated in a work rehabilitation program. Five of the diagnoses mentioned were an adjustment disorder and two were depression. The workers met came from the administrative sector (n=1), IT sector (n=3), customer service sector (n=1) and human resources management sector (n=2). Of this group, five participants kept the same jobs, while two were looking for work.

Lastly, supervisors or human resources managers were also interviewed and recruited through purposive sampling, i.e. individuals at various companies were contacted to see whether they would be interested in participating in the research project. The inclusion criterion was having been responsible for reintegrating into the workplace one or more workers who had been off work for an MHP. The workers, supervisors, and human resources managers did not have to come from the same workplace; they could be recruited from different workplaces. A total of seven interviews were conducted of eight individuals with experience in the RTW of employees

who had been on sick leave for an MHP. These individuals held supervisor, human resources manager, or director positions. They worked in large (n=5) or medium-sized companies (n=3). Unfortunately, we were unable to recruit any supervisors in small companies within this study.

Semi-structured interviews lasting from 60 to 90 minutes were conducted by two interviewers. For the purpose of exploring the clinicians', workers', and supervisors'/HR managers' perceptions, three interview guides, one for each group, were developed through consensus among the researchers involved in the study (Appendix 1). The main topics covered pertained to the factors hindering or facilitating the RTW. All the participants signed a consent form and agreed to having the interviews audiorecorded. They all received an honorarium for the time they gave to the project.

The content of each interview, which was audiorecorded, was transcribed verbatim while preserving participant anonymity. The transcripts were analyzed throughout data collection. As shown in Figure 1, the analysis process was carried out in three steps. An initial analysis of the intra-participant content revealed the factors identified by each participant; their exact wording was retained and note made of the context in which each factor was mentioned. Then, while keeping the results for the three categories of participants separate (clinician, worker, and supervisor/HR manager), an inter-participant analysis was carried out, which highlighted the similarities and differences in their perceptions. Three lists (clinician, worker, supervisor/HR manager) were produced and compared on the basis of this reduction. Finally, the three lists were compared with the factors identified in the literature survey, allowing the information to be confirmed or completed (Shih, 1998). The new categories emerging from the final analysis designated new factors. Also, the factors that could be entered in more than one category were clarified, modified, or eliminated. All diverging results were discussed and further clarified until a satisfactory level of inter-analyst agreement was reached (Landry, 1997). At all stages, the reliability index (intra- and inter-category) for the reductions and the triangulation, i.e. the comparison of the data from different sources, was greater than 80%, which complies with the recommendations (Van der Maren, 1995).



**Figure 1: Data analysis process**

### 5.1.2 Results

Forty-seven factors influencing sick leave duration and RTW were identified. The results of the article analysis are presented below in combination with the data gleaned from the interviews. All the factors identified are shown in Table 1. The original source of the data is given for each factor. The letter *L* indicates data derived from the scientific literature, while the letter *I* indicates data derived from the interview analysis. The factors are divided into four main categories: sociodemographic, clinical, occupational, and insurance-related.

**Table 1: Factors identified in the scientific literature and the interviews**

<b>SOCIODEMOGRAPHIC FACTORS</b>	<b>L</b>	<b>I</b>
▪ Age (Dewa et al., 2003; Engström & Janson, 2007; Nieuwenhuijsen et al., 2006; Shiels et al., 2004; St-Arnaud et al., 2007)	x	x
▪ Family obligations		x
▪ Male (Dewa et al., 2003; St-Arnaud et al., 2007; St-Arnaud et al., 2004; Stansfeld, Fuhrer, Shipley, & Marmot, 1999; Young & Russel, 1995)	x	
▪ Female, combined with the presence of a depressive mood (Koopmans, Roelen, & Groothoff, 2008; Millward et al., 2005; Young & Russel, 1995)	x	x
▪ Social isolation (Shiels et al., 2004)	x	

<ul style="list-style-type: none"> <li>▪ Cultural and/or language barriers</li> <li>▪ Recent occurrence of one or more significant events affecting the worker during his sick leave</li> </ul>		<p style="text-align: center;">X</p> <p style="text-align: center;">X</p>
<b>CLINICAL FACTORS</b>	<b>L</b>	<b>I</b>
<b>The worker's clinical situation</b>		
<ul style="list-style-type: none"> <li>▪ Worker has a history of one or more prolonged absences from work due to a mental health problem (Dewa et al., 2003; Engström &amp; Janson, 2007; Shiels et al., 2004)</li> <li>▪ Lack of treatment (pharmacological or other) for depression for more than six months since stopping work</li> <li>▪ Duration of the worker's absence from work (more than one year) (Dewa et al., 2003)</li> <li>▪ Presence of a comorbidity (mental or physical), including dependence on a psychoactive substance (Schultz &amp; Gatchel, 2008; Shiels et al., 2004; Sullivan, Adams, Thibault, Corbière, &amp; Stanish, 2006)</li> <li>▪ Presence in the worker of clues or signs of a work-related post-traumatic stress disorder</li> <li>▪ Severity of the symptoms related to the worker's mental health problem (Koopmans et al., 2008; Shiels &amp; Gabbay, 2007; Shiels et al., 2004; Sullivan et al., 2006)</li> <li>▪ Treatments outside the standards established in the practice guidelines (Engström &amp; Janson, 2007)</li> <li>▪ Drug treatment regimen (dose, type, frequency) changed several times (Nieuwenhuijsen et al., 2006; Post, Krol, &amp; Groothoff, 2006)</li> <li>▪ Worker makes risky use of his medication</li> <li>▪ Many absences from work in the last two years for various reasons other than a mental health problem</li> </ul>	<p style="text-align: center;">X</p>	<p style="text-align: center;">X</p>
<b>The worker's perceptions of his clinical situation</b>		
<ul style="list-style-type: none"> <li>▪ Worker has difficulty accepting the fact of being off work for an MHP</li> <li>▪ Worker's negative perception of his recovery time (Busch, Goransson, &amp; Melin, 2007; Nieuwenhuijsen et al., 2006; Post et al., 2006; St-Arnaud et al., 2003)</li> <li>▪ Worker has worries about the seriousness of the consequences of his mental health problem (Busch et al., 2007; St-Arnaud et al., 2007; St-Arnaud et al., 2004)</li> <li>▪ The worker's lack of confidence in the rehabilitation program offered to him</li> </ul>	<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>	<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>
<b>OCCUPATIONAL FACTORS</b>	<b>L</b>	<b>I</b>
<b>Work situation</b>		
<ul style="list-style-type: none"> <li>▪ The worker holds an executive position (St-Arnaud et al., 2007; St-Arnaud et al., 2004)</li> <li>▪ The worker's job instability</li> <li>▪ High level of work dissatisfaction felt by the worker</li> <li>▪ Worker's perception that he is minimally involved in decision making</li> </ul>	<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>	<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>

(Johansson, Lundberg, & Lundberg, 2006)		
▪ No job/employer on record in the worker's file		X
▪ Job cuts, staff reductions, etc. when returning to work		X
▪ Major or fast changes have taken place in the worker's organization (St-Arnaud et al., 2004)	X	X
▪ Few accommodation measures possible in the job the worker is expected to return to (St-Arnaud et al., 2004)	X	X
▪ Threats of layoffs in the worker's organization		X
▪ One or more failed attempts to return to work		X
▪ Prejudice against mental health problems is present in the workplace (St-Arnaud et al., 2004)	X	X
▪ Presence of a tense atmosphere or relationship conflicts in the worker's workplace		X
▪ Worker's perception that he receives little recognition from his organization (St-Arnaud et al., 2003; St-Arnaud et al., 2004)	X	
▪ Employer requires information about the time frame for the worker's return (St-Arnaud, Saint-Jean, & Damasse, 2006; St-Arnaud et al., 2004)	X	
▪ Lack of regular communication between the employer and the worker (St-Arnaud et al., 2007)	X	X
▪ The gradual nature of his return to work affects his co-workers' workload (St-Arnaud et al., 2004)	X	X
<b>The worker's perception of his work situation</b>		
▪ The worker's fears about returning to work		X
▪ The worker's perception that he lacks control over events that might occur at work		X
▪ The worker's perception that he has a work overload (St-Arnaud et al., 2004)	X	
▪ Fears and expectations around returning to work due to the negative atmosphere and events that occurred before the worker stopped work (St-Arnaud et al., 2004)	X	
▪ Presence of competitiveness and high performance and/or output requirements in the worker's workplace		X
▪ Worker's perception that his family, friends, physician or insurer are pressuring him to return to work		X
<b>INSURANCE-RELATED FACTORS</b>	<b>L</b>	<b>I</b>
▪ Legal dispute on record (St-Arnaud et al., 2006; St-Arnaud et al., 2004)	X	X
▪ Little insurance coverage		X
▪ Exclusion clauses based on a history of mental health problems (Salkever et al., 2003)	X	
▪ Secondary earnings during absence from work (Barmby, Nolan, & Winkelmann, 2001; Caveen, Dewa, & Goering, 2006)	X	X

### **Sociodemographic factors**

A total of ten studies identified sociodemographic characteristics of individuals. The factors identified were as follows: being older than 44 years of age; being male, which is associated with late medical consultation; and being female and having a diagnosis of depression, which is associated with long-term absence and social isolation (Dewa et al., 2003; Engström & Janson, 2007; Koopmans et al., 2008; Millward et al., 2005; Nieuwenhuijsen et al., 2006; Shiels et al., 2004; St-Arnaud et al., 2007; St-Arnaud et al., 2004; Stansfeld et al., 1999; Young & Russel, 1995). The results of the interviews are consistent with two of these three factors and add the *family obligations* factor when it interferes with the rest required by the worker to recover. Also, they reveal the presence of a significant personal event affecting the worker (e.g. divorce, illness, or loss of a loved one) and of cultural and/or language barriers (in particular, when the worker has difficulty communicating in either French or English).

### **Clinical factors**

Twelve studies explored factors related to the worker's clinical situation and eight different factors were identified. These are the severity of the symptoms associated with the MHP; the presence of a physical or mental comorbidity, including dependence on a psychoactive substance; one or more prolonged absences from work due to an MHP; a sick leave duration of more than one year; the use of pharmacological or therapeutic treatments outside the standards established in the practice guidelines; changing of the drug treatment regimen several times because the symptoms are difficult to stabilize; the perception that the recovery time will be long, if not endless; and the presence of worries about the seriousness of the consequences of his MHP, such as the fear of losing his autonomy or of being ostracized by co-workers (Busch et al., 2007; Dewa et al., 2003; Engström & Janson, 2007; Nieuwenhuijsen et al., 2006; Post et al., 2006; Schultz & Gatchel, 2008; Shiels & Gabbay, 2007; Shiels et al., 2004; St-Arnaud et al., 2007; St-Arnaud et al., 2003; St-Arnaud et al., 2004; Sullivan et al., 2006). The results of the interviews also reveal other factors: the worker has difficulty accepting the diagnosis issued and being off work for an MHP; the presence of a work-related post-traumatic stress disorder, notably if the trauma occurred in the workplace; lack of pharmacological or other treatment for depression more than six months since stopping work; risky use of medication (e.g. poor compliance or drug interaction); many absences from work in the two years prior to the event for reasons other than an MHP; the worker's lack of confidence in the rehabilitation program offered to him.

### **Occupational factors**

Five studies reported on the occupational factors involved in failed attempts to return to work following absence due to an MHP. Of the factors identified, 11 were found in the scientific literature, and five of these were also reported in the interview results. The fact of holding an executive position in a company is associated with a risk of not having support from colleagues and of waiting too long before seeking help, which in turn can complicate the problem and prolong the absence (St-Arnaud et al., 2007; St-Arnaud et al., 2004). In addition, lack of recognition from the organization, the presence of prejudice against mental health problems and the fact that co-workers' workload risks increasing due to the gradual nature of the worker's

return to work can have a major impact on the return-to-work process (St-Arnaud et al., 2003; St-Arnaud et al., 2004). Other factors identified are major or fast changes having occurred in the organization that have radically altered the worker's job description or the organization of his tasks; minimal involvement in decision making; few accommodation measures possible in the worker's job in terms of work schedule or tasks; lack of communication between the employer and the worker during his sick leave; and the fact that the employer requires information about the time frame for the worker's return, which creates additional stress during his recovery process (Johansson et al., 2006; St-Arnaud et al., 2007; St-Arnaud et al., 2006; St-Arnaud et al., 2004). Lastly, two other factors identified in the scientific literature concern the perceptions the workers may have: their fears and expectations around returning to work due to the negative atmosphere and events that occurred before they stopped work, and the perception that they have a work overload, i.e. that they are required to perform overly complex tasks for their current capacities (St-Arnaud et al., 2004).

The interview data revealed factors related to the worker's social environment, such as the fact that the worker feels pressured by his employer to maintain high levels of performance and/or output as soon as he returns to work; the presence of competitiveness in the workplace; the presence of a tense atmosphere or relationship conflicts in the workplace; and the fact that the worker feels pressured to return to work. The interview results also make reference to failed attempts to return to work, job instability, the worker's fears about returning to work (e.g. fears of being unable to do his job or of an unfavourable reception from co-workers), the feeling of a lack of control or ability to manage sudden and unforeseen events at work, and a high level of work dissatisfaction felt by the worker. Lastly, the following factors were also cited as hindering the return to work: threats of layoffs in the worker's organization; no job or employer on record in the worker's file; and job cuts and staff reductions when the worker is returning to work.

### **Insurance-related factors**

Five studies identified factors related to insurance plans. These factors include having a legal dispute on record (e.g. an employer that orders medicolegal evaluations to challenge the worker's diagnosis and his relationship with the workplace) (St-Arnaud et al., 2006; St-Arnaud et al., 2004) and exclusion clauses based on a history of mental health problems (Salkever et al., 2003). Conversely, overly generous sick-day reimbursement contracts or other financial incentives such as the automatic coverage of mortgage payments may also contribute to prolonging absences from work (Barmby et al., 2001; Caveen et al., 2006). An additional factor mentioned in the interviews is that of little insurance coverage, which affects the worker's ability to continue his treatments and sometimes leads him to return to work faster and prematurely.

### **Other factors**

Other factors related to the return to work were also identified (Table 2). These were not incorporated into the instrument because they require the worker to have made one or more previous attempts to return to work. They include a deterioration in the working conditions associated with the job formerly held by the worker, the unaltered maintenance of the factors that triggered the worker's absence, the worker's reassignment to other tasks without his consent, and the lack of support from co-workers when he returns to work (St-Arnaud et al., 2006; St-Arnaud

et al., 2003; St-Arnaud et al., 2004). Added to these is a factor that was mentioned during the interviews: the introduction of surveillance measures and increased control of the work when the worker returns to work.

**Table 2: Factors related to work exposure**

<b>Factors related to work exposure</b>	<b>L</b>	<b>I</b>
<ul style="list-style-type: none"> <li>▪ Deterioration in the working conditions associated with the formerly held job (St-Arnaud et al., 2004)</li> </ul>	x	x
<ul style="list-style-type: none"> <li>▪ Introduction of surveillance measures and increased control of the work when the worker returns to work</li> </ul>		x
<ul style="list-style-type: none"> <li>▪ Unaltered maintenance of the factors that triggered the worker’s departure (St-Arnaud et al., 2006)</li> </ul>	x	
<ul style="list-style-type: none"> <li>▪ Reassignment of the worker to another task without his consent when he returns to work (St-Arnaud et al., 2004)</li> </ul>	x	
<ul style="list-style-type: none"> <li>▪ Lack of support from co-workers when he returns to work (St-Arnaud et al., 2006; St-Arnaud et al., 2003; St-Arnaud et al., 2004)</li> </ul>	x	

Lastly, three red flags were identified by the clinicians. The “red flag” concept is borrowed from the literature on back problems and signifies indicators that point to a serious pathology requiring specific medical care (Waddell, 2004). The red flags identified by the clinicians concern high suicide risk, loss of contact with reality, and other personal health conditions requiring immediate medical management.

## 5.2 Objective 2: Develop a preliminary version of the instrument

This objective involved developing a preliminary version of the instrument, named the Work Disability Diagnostic Interview □ Mental Health Problems (WoDDI-MHP).

### 5.2.1 Methods

The preliminary version of the instrument was developed from the WoDDI used with workers with musculoskeletal disorders (Durand et al., 2002). This instrument had initially been constructed by a committee of experts and was based on the conceptual model of the Disability Creation Process (Fougeyrollas et al., 1998). It is used during an initial meeting between two designated clinicians and a person who is on sick leave. The main characteristic of the instrument is that the factors influencing long-term absence and the return to work, called work disability indicators (WDIs) in the instrument itself, are incorporated directly into the interview questions. The clinician interviewing a person is thus provided with a reminder of each indicator as he asks questions about one or another component or aspect of the work disability situation, and can immediately identify whether or not the factor is present. Self-administered questionnaires are also used in order to assess and triangulate the data on the key concepts involved in the issue. These questionnaires are the Psychological Distress Inventory (Préville, Boyer, & Potvin, 1992), the Roland-Morris Disability Questionnaire (Roland & Fairbank, 2000), the Work APGAR Scale measuring support at work (Williams et al., 1998), the TAMPA Scale for Kinesiophobia (Crombez, Vlaeyen, Heuts, & Lysens, 1999) and the numeric pain-rating scale (Ohnhaus & Adler, 1975).

The instrument for a clientele with MHPs was developed in five steps. The wording used in the MSD instrument for the WDIs of factors influencing long-term absence and the return to work was retained for this project. The use of an existing instrument meant that several questions developed in relation to similar factors could be reutilized, which in turn sped up the formatting process.

Steps:

1. Identification and classification of the WDIs identified in the instrument for musculoskeletal disorders in relation to work disability and the factors identified in the scientific literature (Objective 1 of this study (Table 1)).
2. Development of questions related to the factors identified in Objective 1 but not present in the WoDDI developed for workers with MSDs.
3. Development of the WoDDI for workers with mental health problems (WoDDI-MHP) and of a user's guide containing a glossary of the various WDIs.
4. Qualitative pre-testing of the first version of the guide with three clinician-users to ensure the clarity and accuracy of the questions and the WDI formulations. Each WDI was reviewed separately and the following questions were asked: (1) is this WDI formulated clearly and accurately?; (2) does this WDI seem to you to be well-placed in the interview?; and (3) in

your opinion, do the questions the worker is asked make it possible to identify the presence or absence of this WDI? The participating clinicians had to be individuals familiar with administering the WoDDI. Their comments were noted by hand and clarifications made in the new version for MHPs.

5. Identification of additional instruments to be used with the WoDDI to support the diagnostic impressions and the assessment of the level of functioning of the person evaluated. The instruments were selected by mental health experts. The following selection criteria were applied: (1) instrument validity; (2) speed of use; and (3) simplicity of use in the clinical setting. Proposals were first collected from the participants and a list of potential instruments was drawn up. Each participant was then contacted a second time and the list of instruments compiled in the previous step was proposed, along with their psychometric properties, the time they take to administer, and the nature of the results generated. Upon completion of this step, a final selection of instruments was made.

## **5.2.2 Results**

A preliminary version of the WoDDI-MHP and a user's guide were prepared. The tool had seven sections: (1) prior and current health condition (14 WDIs); (2) lifestyle habits (1 WDI); (3) socio-familial background (6 WDIs); (4) financial situation (2 WDIs); (5) work environment (19 WDIs); (6) worker's perceptions and expectations (2 WDIs); and (7) results analysis and recommendations. In addition, three red flags were added at the end of the sections.

A user's guide was developed to help the clinicians clarify how each WDI influences the work disability situation. For example, the worker's age is an indicator when the worker is older than 44 and when associated with major changes in work organization to which the worker has trouble adapting.

A qualitative pre-test was carried out in which three clinicians—specifically, two occupational therapists (15 and three years' experience in occupational rehabilitation respectively) and an ergonomist (six years' experience)—used the instrument and guide. During the pre-test, clarifications of 26 WDIs were required. The clarifications mainly concerned the user's guide definitions. Also, six WDI were moved to different sections so that they corresponded better to the interview questions. Lastly, eight questions were reformulated to make the data collection more precise and better identify the WDIs. For example, in the work environment section, the question regarding the circumstances of the departure was clarified by adding parenthetical examples (e.g. conflicts with co-workers, sudden departure with no warning).

Lastly, five mental health specialists were consulted to explore the supplementary tools to be used with the WoDDI-MHP: three psychologists (with between one and six years of experience) and two occupational therapists who had worked in the work rehabilitation field for four and eight years respectively. In all, three tests were retained in accordance with the predetermined criteria:

1. Structured Clinical Interview for the DSM-IV-TR (SCID-I): the SCID-I is a tool for diagnosing the main MHPs. This interview allows the DSM-IV criteria to be assessed, is divided into ten modules, and covers the following disorders: psychotic disorders; mood disorders; substance abuse disorders; anxiety disorders; somatoform disorders; eating disorders; and adjustment disorders. The SCID is considered the gold standard for determining a mental health diagnosis. Psychometric studies have demonstrated good validity (Fennig, Craig, Lavelle, Kovaszny, & Bromet, 1994; Kranzler, Kadden, Babor, Tennen, & Rounsaville, 1996; Ramirez Basco et al., 2000; Shear et al., 2000) and interrater reliability (Skre, Onstad, Torgersen, & Kringlen, 1991; Williams et al., 1992; Zanarini & Frankenburg, 2001; Zanarini et al., 2000).
2. Global Assessment of Functioning (GAF): The GAF scale allows a person's psychological, social, and occupational functioning to be assessed on a continuum ranging from 1, which corresponds to the illest individual, to 100, which corresponds to an individual with a satisfactory level of symptoms and functioning in his social and family environment (Spitzer et al., 2000). The scale is based on the DSM-IV classification and is particularly useful for tracking patients' clinical progress using a single score. This instrument has demonstrated acceptable interrater reliability (Soderberg, Tungstrom, & Armelius, 2005) but low predictive reliability (Moos, Nichol, & Moos, 2002). The instrument is widely used in research and clinical situations.
3. Job strain assessment is done using the Job Content Questionnaire (Karasek et al., 1998; Karasek et al., 1985; Karasek & Theorell, 1990). This questionnaire consists of 29 items divided into three scales: psychological demand; decision latitude; and social support (Johnson & Hall, 1988). The psychological demand scale (nine items) measures workers' perception of the amount of work to be done and the mental requirements and time constraints related to their work. The decision latitude scale is comprised of two subscales: decision-making authority (three items) and skill discretion (six items). The social support scale is comprised of two subscales: social support from superiors (5 items) and social support from co-workers (6 items). Taken together, the items in this scale allow three components of social support from supervisors and co-workers to be measured (Bourbonnais & Mondor, 2001). The French version of the psychological demand and decision latitude subscales has been validated by Larocque et al. (1998). The Cronbach's alpha coefficients obtained range from 0.68 to 0.85, supporting the instrument's internal validity. Its discriminative validity is also satisfactory, according to Larocque et al. (1998).

Three steps for administering the WoDDI-MHP were identified. The first step for the clinician is to identify the WDIs that are present in the person off work due to an MHP and to note them directly in the instrument.

In the second step, the clinician identifies, at the end of the instrument, the relative weight of each WDI with respect to the development or maintenance of the work disability. To do so, a seven-point ordinal scale—ranging from 1 (highly unlikely) to 7 (highly likely)—is completed. Thus, for each WDI the clinician must note to which extent the indicator corresponds to a factor related to the individual's return to work. When the weighting is completed, the clinician extracts the main WDIs (those with the highest weight) and takes cognizance of the results of the

supplementary questionnaires, namely the SCID-I Structured Clinical Interview, the Global Assessment of Functioning, and the Job Content Questionnaire.

In the third step and based on this list and complementary information, the clinician selects the WDIs, giving priority to those that play the most significant role in the absence from work and those that could have a catalyzing effect on the reduction of other WDIs following an intervention. Two categories of indicator are present: modifiable (e.g. fear of relapse) and non-modifiable (e.g. age). Based on this final list of WDIs, recommendations are developed for eliminating the WDIs or reducing their impact. More precisely, specific interventions are targeted at the modifiable WDIs while, for the non-modifiable WDIs, the clinician closely monitors the indicator's influence on the attainment of objectives during rehabilitation. It should be noted that the recommendations can be of various natures, such as referral to a psychiatrist for a more specific diagnosis, referral to a psychologist for cognitive reframing, or gradual exposure to work.

### **5.3 Objective 3: pilot study of the instrument**

This purpose of this objective was to conduct a pilot study of the instrument with users in order to identify the factors facilitating and hindering its use.

#### **5.3.1 Methods**

For this objective, an exploratory approach was used with the aim of establishing the clarity, accuracy, and acceptability of the instrument's content. Clinicians administered the instrument to five persons who were on extended leave due to an MHP and had been admitted to a rehabilitation program. The client inclusion criteria were: (1) being off work for the first time due to an MHP, with a diagnosis of adjustment disorder, major depression, generalized anxiety disorder, or panic disorder with or without agoraphobia made by a physician in accordance with the DSM-IV-TR criteria; and (2) having been on leave from work for between three and 12 months.

Following the WoDDI-MHP trials, a structured 60-minute interview was carried out with the clinicians who had administered the instrument in order to identify the factors facilitating and hindering its use. The interview guide (Appendix 2) was based on the Physician Guideline Compliance Model (Maue, Segal, Kimberlin, & Lipowski, 2004) and adapted for the purposes of this study. The interviews were audiorecorded and the list of questions was sent to the participants ten days before the meeting. The recordings were transcribed verbatim. A first-level content analysis was performed on the transcript for each clinician. A second-level analysis then brought out the similarities and differences between the clinicians. The results of these analyses were reported to the co-researchers and used as a basis for developing a second version of the WoDDI-MHP.

### **5.3.2 Results**

Two expert clinicians very familiar with the evaluation approach used the WoDDI-MHP and took part in an interview. They had, respectively, 12 and six years' experience in administering the WoDDI.

First, both participants questioned the instrument's presentation and format. They stressed the format's poor usability during administration of the instrument. Suggestions were made to reduce the number of pages and rearrange sections. The participants also stated that they had trouble using the scale proposed in the preliminary version, which was a seven-point ordinal scale. They found there were too many gradations and they preferred not to use the scale because the distinctions between the intermediate levels were unclear. However, a five-point scale struck them as more acceptable in a context where one of the objectives of the instrument's design is to favour explicitation of the gradations and final analysis of the data. Both participants also identified certain WDIs whose definitions in the user's guide did not appear clear when they were attempting to interpret them. For example, the "Little insurance coverage" WDI was updated to "Little insurance coverage: Insufficient coverage of costs to allow the worker to continue the treatments (e.g. additional daycare costs that he is unable to meet are incurred), and/or the type of insurance policy that the worker has offers coverage that is disadvantageous for him, which leads him to return to work faster even though he does not feel ready."

Following these interviews, a list of changes was prepared. The list was returned to the two participants to check whether the changes were sufficiently understandable. Six discussions took place before final approval of the changes was obtained.

## 6. DISCUSSION

The objective of this study was to develop an instrument for evaluating the factors that influence the long-term sick leave and return to work of individuals with an MHP. It arose from a scientific desire to begin studying the factors influencing long-term work absence and return to work in good mental health using a methodology designed expressly to describe the factors encountered in regular practice by various persons involved in the return-to-work process and to relate them to the scientific literature. This study was structured into three steps. The first step involved identifying, through a literature review and interviews, a total of 47 factors influencing the long-term work absence and return to work of individuals with an MHP. The conceptual frameworks retained in this study (Fougeyrollas, 1991; St-Arnaud et al., 2003) allowed the search for factors to be positioned at the level of the individual, his interaction with work, and his work activity. In steps 2 and 3, the instrument was developed, pre-tested, and pilot-tested with targeted users, who administered it to the intended clientele. This instrument was subsequently revised to make it more understandable and easier to use and to document obstacles and aids to its use in regular practice.

In this study, the search for factors influencing the long-term work absence and return to work drew on various sources. First, a survey of the literature revealed that, to date, few studies have focused on the return-to-work process and that the majority of these have instead concerned the frequency of work absences, short-term absences, the predictors of a work absence for persons with a mental disorder, and the employment retention of individuals with a serious mental disorder (Corbière, Lesage, Villeneuve, & Mercier, 2006; Wewiorski & Fabian, 2004). To our knowledge, only one study has entailed a survey of the risk factors for long-term work absence due to an MHP (Blank et al., 2008). Most of the quantitative studies surveyed explored multiple factors but without taking physical or mental comorbidity into account, thereby limiting the possibility of drawing clear conclusions (Nieuwenhuijsen, Verbeek, de Boer, Blonk, & van Dijk, 2004; Nieuwenhuijsen et al., 2006; Pluta & Accordino, 2006; van der Klink & van Dijk, 2003). However, it would appear that several factors interact with others or depend on the presence of others, such as the presence of an inability to eventually resume work, worries about performance requirements, and the lack of control over the occurrence of events at work (Crook, Milner, Schultz, & Stringer, 2002). Lastly, the definition of the concept of “mental disorder” is not consistent throughout the literature, which limits the possibility of comparing and generalizing from results (Blank et al., 2008). It should be noted that the literature in this study was selected solely on the basis of theme and without reference to the nature or robustness of the research designs. This choice was motivated by the current low level of knowledge in the field and supported by the study of Blank et al. (2008), which states that few factors are identified when strict statistical methods are applied. This decision made it possible to identify a larger number of factors, albeit ones that will have to be confirmed in future studies. Despite the shortcomings mentioned, the analysis of the scientific literature allowed a total of 26 factors to be identified, 13 of which overlap with the results that emerged from the interviews. The factors were grouped into four main categories: sociodemographic; clinical; occupational; and insurance-related.

Supplementing the scientific literature review with interviews of persons involved in the return-to-work process uncovered an additional 21 factors not found in the literature; in other words, around one-third of the new factors were identified in the interviews. These results confirm the importance of supplementing the current literature with qualitative approaches, since the literature is clearly insufficient for describing the complex phenomenon of prolonged disability due to an MHP. Besides providing additional information about the factors, qualitative approaches make it possible to develop an instrument that better meets users' needs. These experience-based factors were identified via a rigorous process. Specifically, interrater reliability was verified when the results were analyzed and triangulated with the literature review results. Also, the qualitative interview results reached saturation within each group and between the groups, indicating that the players involved in this phenomenon were witnessing a similar reality. However, a limitation should be noted: none of the workers who participated in the interviews was on leave due to an anxiety disorder. Other studies will be required to verify whether the factors influencing long-term work leave and return to work are common among the three MHP categories, that is, anxiety disorders, adjustment disorders, and mood disorders.

As it currently stands, the factors influencing long-term work leave and return to work appear isolated, with no explicit relationships within a given category. However, the hypotheses developed to explain the results further highlight their being part of a system of interrelated factors. For example, male gender is a risk factor for a prolonged absence in five retained studies (Dewa et al., 2003; St-Arnaud et al., 2007; St-Arnaud et al., 2004; Stansfeld et al., 1999; Young & Russel, 1995). That risk factor can be explained, among other things, by the fact that men wait too long before consulting a physician, which itself is another risk factor identified in the literature (Dewa et al., 2003). This delay could also be due to a difficulty in accepting the diagnosis of a mental disorder (a factor identified in the interviews) or even to the fact that men are less open about their personal problems than women are (St-Arnaud et al., 2004). Another example concerns the duration of the leave, which, when extended to more than one year, becomes a risk factor (Dewa et al., 2003). This factor can be explained by, among other things, its possible relation to the severity of symptoms (Koopmans et al., 2008; Shiels & Gabbay, 2007; Shiels et al., 2004; Sullivan et al., 2006), to a drug treatment regimen that has changed several times because the worker's symptoms proved difficult to stabilize (Nieuwenhuijsen et al., 2006; Post et al., 2006), or to the individual's negative feelings about the duration of the treatment (Busch et al., 2007; Nieuwenhuijsen et al., 2006; Post et al., 2006; St-Arnaud et al., 2003).

Consequently, to assess the likelihood of prolonged disability, it is not enough simply to identify and list the factors present; an attempt must also be made to comprehend their interactions. A clearer understanding of these interactions will make the factors easier to identify because they will be contextualized in a global and interdependent framework. Such a contextualization and weighting of the factors is the result of a clinical judgement. Thus, when the instrument is used in clinical situations, it would appear essential that the clinicians be trained in its use in order to ensure that the factors are analyzed on the basis of trained clinical reasoning and not a compilation of a list of factors. The proposed training would consist of exposing the clinicians to a variety of cases in order to develop with them the clinical reasoning guideposts appropriate for the problems specific to this clientele.

This study was carried out with the aim of developing an instrument that would be both comprehensive and practical for users. Accordingly, several clinicians were consulted and the instrument was pre-tested with workers and adapted to clinicians' needs. Although a pilot study was carried out, that step did not allow for actual implementation and adoption of the instrument in clinical settings. Before the instrument can be implemented and adopted, it must be validated and implemented in clinical and research settings (Dillman, 2000; Streiner & Norman, 2008). However, that alone is not enough to ensure the instrument's integration into regular practice. To make the instrument easier to use, all the factors influencing long-term work absence and return to work were integrated into the clinician's initial interview. The WoDDI-MHP is in the form of guide for evaluating a person on extended leave due to an MHP. It takes its place as an evidence-based practice, because it uses data from both scientific literature and users and a systematic factor-identification process. In future steps taken to integrate the instrument into regular practice, it will be necessary to consider all the obstacles and aids to adopting this innovation. Indeed, several authors have noted that adopting innovation in the health care field is a complex, multi-level process. In a study of the determinants of innovation within health care organizations, Fleuren et al. (2004) identified 50 determinants that were grouped into four main categories: (1) characteristics of the socio-political context (e.g. financial burden imposed by the innovation, compliance with rules and laws); (2) characteristics of the organization (e.g. size, available expertise, logistics procedure required by the innovation, number of potential clients); (3) characteristics of the users of the innovation (e.g. support of co-workers and immediate superior, required skills and knowledge, ethical considerations); and (4) characteristics of the innovation (e.g. relative advantage, compatibility, complexity, testability, observability). The choice of strategies that will be used to facilitate adoption of the WoDDI-MHP will have to take account of these determinants. First, the WoDDI-MHP appears to offer the advantage of being unique and favouring a systematic, evidence-based evaluation practice in the work disability field. However, for it to be adopted, an implementation and implementation support strategy needs to be put in place. Not only should this strategy motivate health care stakeholders through various educational strategies, but it should also support them in adopting this innovation in their workplace.

The main result of this study has been the creation of an evaluation instrument that takes into account all of the personnel, medical, workplace, and insurer systems that serve to create, maintain, or reduce long-term disability. This position is supported by studies that recognize the multi-factorial nature of prolonged disability due to a mental disorder (Nieuwenhuijsen et al., 2006; Pluta & Accordino, 2006; van der Klink & van Dijk, 2003; Wilford et al., 2008). This is the first step in an integrated treatment and rehabilitation approach for workers. The Marois and Durand (2009) study showed that early screening for the factors related to long-term work absence and return to work had a positive impact on the rehabilitation program outcomes. The hypothesis put forward to explain these results is that knowing the factors very early in the program enabled the clinicians to individualize the intervention and target the factors from the start (Linton et al., 2005; Waddell, Burton, & Main, 2003). It should also be noted that occupational rehabilitation interventions in the natural workplace remain little documented for persons with MHPs. A study by Briand et al. (2007) shed promising light on the elements of a return-to-work program for cases involving musculoskeletal disorders, elements that could be transposed to cases involving mental health disorders. Also, several conceptual models relating

to musculoskeletal disorders (see Baril et al. [2008] for a complete survey of the models) could apply in part to mental health problems and provide a framework for organizing data from a range of sources. Thus, the WoDDI is a first step toward a more holistic and integrated intervention approach. Efforts should now be focused on validating the instrument, implementing it, and refining the return-to-work intervention for individuals with an MHP.

## **7. CONCLUSION**

This study is concerned with the factors influencing the long-term work absence and return to work of persons suffering from an MHP. It meets a current need in workplace and clinical environments dealing with workers on leave due to an MHP. The multi-dimensional nature of the identified factors and the complexity of the issues make it difficult if not impossible to isolate the significant factors associated with this health problem. However, the use of various sources of information has increased our understanding of the complexity of this issue. Workers' perceptions and representations as well as organization-, workplace- and insurance-related factors are seen as acting synergistically to facilitate or hinder individuals' return to work. To facilitate the systematic screening for these factors, the WoDDI-MHP was developed for clinicians working with individuals with MHPs. The instrument is a first attempt to improve intervention with workers by integrating a holistic vision of the problems and issues. In the years ahead, additional studies should be carried out to validate this tool.



## **LIST OF PUBLICATIONS PRODUCED IN THE CONTEXT OF THIS GRANT**

### **Presentations at peer-reviewed conferences**

- Durand, M. J., St-Arnaud, L., Briand, C., Coutu, M. F., Corbière, M. Développement d'un outil diagnostique de la situation de handicap au travail pour les personnes en absence prolongée du travail pour des raisons de santé mentale. Symposium: Santé psychologique et milieu de travail : des méthodes et des pratiques à construire. Association internationale de psychologie du travail de langue française, Québec City, August 19-22, 2008.
- Durand, M. J., St-Arnaud, L., Briand, C., Coutu, M. F., Corbière, M., Rouleau, A. L'entretien diagnostique et l'incapacité au travail : un nouvel outil. 3<sup>e</sup> Conférence Internationale CIST sur les facteurs psychosociaux au travail, De la connaissance à l'action, Québec City, Canada, September 1-4, 2008.
- Durand, M. J., St-Arnaud, L., Briand, C., Coutu, M. F., Corbière, M., Rouleau, A. Work disability diagnostic interview (WoDDI) first step for use with individuals on a long-term work absence for mental health reasons. 14th European Congress of Work and Organisational Psychology, Santiago de Compostela, Spain, May 13-16, 2009.

### **Manuscript submitted to peer-reviewed journal**

- Durand, M. J., Corbière, M., Briand, C., Coutu, M. F., St-Arnaud, L. Facteurs contribuant à la situation de handicap au travail pour les personnes en absence prolongée du travail pour des raisons de santé mentale. (Under review).



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## APPENDIX 1: INTERVIEW GUIDES (OBJECTIVE 1)

### Interview Guide for Workers

**Introduction:** To better understand the factors that facilitated and hindered your return to work, we would like to start by looking at the health problem that led to your absence from work.

#### A. Description of the initial situation

1. Was this the first time you went on leave from work due to a mental health problem?
2. Describe the health problem to me.
3. When did you stop working?
4. Do you believe that you currently have the same health problem?
5. Did you decide to seek professional help? If so, when?
6. What motivated you to do so?
7. Were you given a diagnosis? By whom?
8. What was your reaction to the diagnosis?
  - surprise
  - agreement
  - disagreement
  - relief
  - stress
  - anger
9. Did you receive treatment? When? Please specify: type of treatment, length of time you took medication, dose.
10. Who recommended this treatment initiative?
11. Which clinicians did you see for your problem?
12. Did you trust the clinical judgement of the clinicians involved?
13. Did you feel you were understood and heard by the clinicians involved?
14. What results did you expect from the services offered (recovery, duration)?

#### B. Characteristics and impacts of the problem

15. What impact did your health problem have on your life?
  - on those in your circle
  - at home
  - at work
16. How long did you suffer from this health problem? Were there high points and low points?
17. Specifically, how long were you absent from work?
18. In your opinion, were you absent from work long enough? Why?
19. What would you suggest about returning to work to a person who has the same problem?

**C. The return to work**

20. How did your return to work take place?
21. Accommodation measures (type), progress, steps, type of meeting, with whom?
22. If it was a progressive return to work, the length of the progressive return to work and how it was implemented.
23. Who determined the terms and conditions of your return?
24. In your opinion, what helped you return to work?
25. In your opinion, what hindered your return to work?
26. In your opinion, could any aspects have been better? Which ones?
27. Do you feel like you took part in the various decisions regarding your return to work? Did you want to take part in the decisions?
28. Have you now resumed all your work tasks? How was that accomplished?

**D. Characteristics of the work**

29. Can you describe the characteristics of your work?
30. Do you feel that some aspects of your work are hard on your mental health? Examples:
  - Work overload
  - Fast pace of production required
  - Difficult relations with your superior
  - Lack of social support from co-workers
  - Little recognition from peers and the supervisor
  - Major role conflict
  - Lack of input in decision-making and inadequate distribution of information (individual and organization levels)
  - Rapid organizational changes
  - Other
31. On the other hand, are there aspects of your work that you find helpful for your mental health? If so, which ones?

**E. Impacts of the mental health problem on work**

32. Since returning, have you resumed all your work tasks? How was that accomplished?
33. Has anything changed between you and your co-workers, your supervisor?
34. How have they reacted to your health problem?
35. Did you have to explain the reasons for your absence? When did you do so?
36. How would you describe your relationship with your employer (before and after your absence)?

Lastly, is there any other aspect you would like to mention that helped or hindered your return to work and that we haven't already discussed?

## Interview Guide for Clinicians

**Introduction:** We are interested in the factors that hinder and help the return to work of people who have had mental health problems such as depression or burnout. You have been chosen because, as a clinician, you have worked with people in that situation. First, we would like to discuss with you the clientele that you serve; then we will move on to the various components of the rehabilitation process.

### A. Description of the clientele served

1. Generally speaking, what type of clientele do you see in your practice?
  - What are the main diagnoses?
  - Who usually makes the diagnoses?
  - Of the people you treat, what percentage have a regular paid job?
  - Generally speaking, how long are the sick leaves of the people who have mental health problems?
    - At what point in their episode of illness do these people consult you (e.g. first signs of the problem, late in the episode)?
2. Generally speaking, who refers your clientele to you (CSST, SAAQ, private insurers, attending physicians, other health care stakeholders, etc.)?

### B. Description of the rehabilitation process

3. How would you define a progressive return to work?
4. In your opinion, what is the goal of a progressive return to work?
5. Do you use it as an intervention method?
6. How do you proceed?
  - Sub-questions if needed:
    - Do you use the job descriptions provided by the employer or a database like REPÈRE?
    - Do you do telephone follow-up with the worker?
    - Do you do other interventions?
    - Do you go to the work station?
    - Do you perform an analysis of the job?
    - Do you meet with the supervisor and the head of Human Resources (or the equivalent)?
    - Do you meet with the co-workers?
    - Do you take part in determining the tasks that will be assigned as part of the progressive return to work?
    - Do you evaluate the possibility of adjusting the return-to-work activities?
    - How do you adjust level of activity at work?
    - Do you provide assistance?
    - Do you change the working hours?
    - Do you alter the tasks?
    - Do you hierarchize activities?
    - Do you rank job demands?
    - On what do you base this ranking?
    - Do you assess the worker's progress? How?

- Does the worker have any say in determining the activities to be carried out during the progressive return to work?

### **C. Research into the factors facilitating and hindering the return to work**

7. Among the workers whose cases you have managed:
  - Were there cases of success or failure in the intervention process that you consider universal, that is, entire categories of persons who returned to work or didn't return to work?
8. Specifically, those who returned to work were characterized by:
  - Personal characteristics (including the diagnosis)
  - Psychosocial environment at work
  - Life events outside of work
9. Conversely, those who did not return to work were characterized by:
  - Personal characteristics (including the diagnosis)
  - Psychosocial environment at work
  - Life events outside of work

### **D. Assessment of patients/work environment**

10. How do you go about assessing:
  - Work capacity
  - Job demands
  - Non-standard demands
  - Work overload
  - Fast pace of production required
  - Poor relationship with the superior
  - Lack of social support at work
  - Low recognition (esteem from one's circle)
  - Major role conflict
  - Lack of input into decision-making and inadequate distribution of information (individual and organization levels)
  - Rapid organizational changes
11. Do you measure the job demands and the worker's capacity?
  - If not, why not?
  - If yes, how comfortable do you feel about this process?
12. How comfortable do you feel about determining the fitness to resume work of a person who is consulting you (interaction between capacity and demands, compatibility)?

## Interview Guide for Supervisors

**Introduction:** We are interested in the factors that help and hinder the return to work of people with psychological health problems such as depression or burnout. You have been recommended to us because, as a supervisor or human resources manager, you have assisted people in such situations. In order to keep the discussion grounded in reality, we ask you to think about the last person you dealt with or about a person whose return-to-work experience made an impression on you. The person must have returned to his or her former job or another job on a full-time or part-time basis. If you think of other persons whom you have dealt with and whose return-to-work process was very different from the one we will be discussing, you can mention them during the interview. We would like to start by discussing with you the arrangements made for the return of the person you have in mind.

### A. Return to work

1. To help us understand your answers about the person you have in mind, we would like to know if you know which mental health problem was involved.
  - Do you know the source of this problem?
  - Had the person previously been absent from work? For what reason?
2. In your opinion, what things helped the person return to work?
3. What arrangements were made for this person's return?
  - Was it a progressive return to work?
  - What types of accommodation measures have been or were put in place?
  - Did you provide some form of support to the employee during his or her absence from work and on his or her return?
  - Did you perform follow-up in the weeks following his or her return?
  - Who decided on the terms and conditions of the person's return to work?
  - Did the person take part in the various decisions regarding his or her return to work? In which ways, in your opinion?
  - In which ways were you involved in the decision-making related to this person?
4. In your opinion, what posed obstacles to the return to work or made it more difficult?
5. In your opinion, was the leave from work long enough for this worker?
6. Did you notice whether the person still had trouble performing his or her job after returning to work? If so, were any special actions taken?
7. During the process, what did you expect from the professional services (psychologist, occupational therapist, physician)?
8. In your conversations, did the person ever justify his or her absence? Should he or she have done so?
9. What instructions were you given by your company's (employer's) senior management regarding this person's return to work?
10. What kind of support or latitude did you receive from your company's senior management regarding this person's return-to-work process (type of accommodation measures, number and nature of communications)?
11. During the return to work, did you encounter any conflicts of interest between the various stakeholders (e.g. Human Resources, supervisor, physician, psychiatrist)?

12. How did you find managing this process (e.g. demanding, easy, hard to manage with the other partners)?
13. In your opinion, were there aspects of the process used that could have been improved? Which ones?
14. As a manager (or supervisor), do you sometimes feel like you need assistance or to discuss the management of these individuals with others?
15. Do you ever feel alone or isolated when managing returns to work?

### **B. Characteristics of the work**

Now we are going to look at the characteristics of the job of the worker we are discussing. First, we need to clearly distinguish between the job held by the worker before he or she went on leave and the job involved in the return to work.

Were they the same job?

#### **If yes:**

16. Can you describe the characteristics of the work (job title, demands, organization, conditions)?
17. Do you feel that certain aspects of the job were hard on the mental health of the worker you have in mind? For example:
  - Work overload
  - Fast pace of production required
  - Difficult relationship with the superior
  - Lack of social support from co-workers
  - Low recognition from peers and the supervisor
  - Major role conflict
  - Lack of input into decision-making and inadequate distribution of information (individual and organization levels)
  - Rapid organizational changes
  - Other
18. On the other hand, do you feel there were aspects of the job that were favourable for the worker's mental health? If yes, which aspects?

#### **If no** (*i.e. different jobs before and after the worker's leave*)

What were the reasons for changing the job (e.g. change in work organization, too heavy job demands)?

#### **About the job before the leave:**

19. Can you describe the characteristics of the work (job title, demands, organization, conditions) before he or she went on leave?
20. Do you feel that certain aspects of this job were hard on his or her mental health? For example:
  - Work overload
  - Fast pace of production required
  - Difficult relationship with the superior
  - Lack of social support from co-workers
  - Low recognition from peers and the supervisor

- Major role conflict
  - Lack of input into decision-making and inadequate distribution of information (individual and organization levels)
  - Rapid organizational changes
  - Other
21. On the other hand, do you feel there were aspects of the job that were favourable for the worker's mental health? If yes, which aspects?

**About the job after the leave:**

22. Can you describe the characteristics of the work (job title, demands, organization, conditions) of the job held during the return to work?
23. Do you feel that certain aspects of this job are hard on the person's mental health? For example:
- Work overload
  - Fast pace of production required
  - Difficult relationship with the superior
  - Lack of social support from co-workers
  - Low recognition from peers and the supervisor
  - Major role conflict
  - Lack of input into decision-making and inadequate distribution of information (individual and organization levels)
  - Rapid organizational changes
  - Other
24. On the other hand, do you feel there were aspects of the job that were favourable for the worker's mental health? If yes, which aspects?

**C. Factors helping or hindering the person involved in the progressive return-to-work process**

Now we are going to discuss various aspects of your relationship with this person.

25. What attitude did you adopt toward the worker (structuring, protective, friendly)?
26. What were your expectations of the worker during the return to work?
27. Generally speaking, do your expectations and attitudes vary from employee to employee, depending on the job he or she holds (white collar vs. blue collar)?
28. How would you describe your relationship with the person? Before and after his or her absence?
29. Were the worker's co-workers informed about his or her return to work?
30. How did the co-workers react when you informed them of the person's return to work?
31. If an announcement was made to the co-workers, did you perceive it as helpful or, on the contrary, as counter-productive?

Lastly, is there any another aspect you would like to mention that helps or hinders returns to work and that we haven't already discussed?

Thank you for your valuable input.

## APPENDIX 2: INTERVIEW GUIDE (OBJECTIVE 3)

As part of the research project to develop the Work Disability Diagnostic Interview for persons absent from work due to a mental health problem (WoDDI-MHP), we asked you test the instrument on a few patients. In this interview, we would like to obtain your opinion on various aspects of the guide.

- 1) First, how many patients did you use the WoDDI-MHP with? Over what time period (length in months)?
- 2) Are the descriptions and definitions of the WDIs given in the glossary clear and precise? Is the glossary helpful and complete? Is the glossary's format user-friendly?
- 3) Based on your experience with this clientele, are any WDIs missing?
- 4) In your opinion, are any WDI-related questions missing from the instrument? If so, what are they?
- 5) In your opinion, should any questions be reformulated or clarified in the instrument used with the workers? If so, which ones?
- 6) Is the WoDDI's format satisfactory and user-friendly?
- 7) To operationalize the concept of weighting and facilitate types of research analysis, we appended a scale to the instrument.
  - a. Is the scale easy to use?
  - b. Is the wording of the descriptors (highly unlikely to highly likely) clear with respect to their interpretation?
  - c. Do you have any additional comments on this aspect of the instrument?
- 8) The interview is now over. Are there any other aspects of the content or the administering of the instrument or any other points related to the instrument that you would like to comment on?

Thank you for your cooperation!