

Occupational Rehabilitation

Studies and Research Projects

REPORT R-616



**Exploring Differences in the Representations
Held by Clinicians and Those Held by Workers
Suffering from Musculoskeletal Disorders,
during the Occupational Rehabilitation Process**

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Abstract

Issue: Work occupies an important place in people's active lives and is a determining factor in shaping adults' identity and their sense of social belonging. Yet every year, a large number of individuals are absent from work due to musculoskeletal disorders (MSDs), leaving 8% of them unable to continue working. This small number nonetheless accounts for half of the compensation indemnities paid by the CSST. Many factors play a part in the development and long-term duration of work disability. Of these, some pertain to the person, workplace, or compensation policies, while others pertain to the healthcare and insurance systems. In terms of the person, his¹ representation (i.e. understanding of his disease or condition) leads to the adoption of behaviours aimed at adapting to or controlling the problem. Clinicians' representations have not yet been the subject of investigation. At present, it is therefore impossible to understand the factors in the clinician/worker relationship that contribute to a premature end to the rehabilitation management process or to a non-return to work. In the therapeutic context, the existence of differences in representations would appear to be associated with a poor prognosis and to confirm the importance of the clinician understanding the worker's representations and of defining goals and strategies with the worker's input.

Objective: The general objective of this exploratory study was to describe in detail, based on a limited number of cases, the various scenarios depicting the differences between clinical judgment, occupational rehabilitation professionals' understanding of workers' representations of their MSDs, and workers' actual representations, during the occupational rehabilitation process.

Methods: This pilot project used a multiple case-study design in which a case constituted the relationship between a clinician and the worker he was managing. Semi-structured prospective interviews were conducted with five clinicians who were managing 12 cases involving workers who were starting an evidence-based occupational rehabilitation program.

Results: The results of this study brought to light various scenarios depicting differences in representations. However, not all the differences necessarily had a negative impact on the outcome of the rehabilitation program. When the difference existed at the level of the clinical judgment, the clinician was able to discuss it directly with the worker, who was in turn able to change his representations and move closer to the principles presented during the intervention. In other cases, the representations had to be addressed indirectly through the introduction of a behavioural strategy. What emerged from the analyses was the crucial importance, for the worker, of congruence between the proposed strategy and his representation. For the clinician, it was important that the problem be clearly identified to allow for the use of concrete, pragmatic strategies. It further appeared that the clinician did not have to share all the details of his clinical understanding with the worker.

Impacts: This study highlights how important it is that clinicians understand the representations held by workers who have a musculoskeletal disability. It also underscores the importance of the objective being acceptable to both parties, or at least of the proposed strategy making sense to the worker.

¹ The masculine form is used in this text solely in the interests of readability. It refers equally to women and men, with no gender discrimination intended.

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1. Summary of the issue and literature review

Work occupies an important place in people's active lives and is a determining factor in shaping adults' identity and their sense of social belonging. It enables them to acquire a certain social status, and above all, offers them the possibility of financial autonomy, self-fulfilment, personal growth, and time and space management (Baril, Martin, Lapointe, & Massicotte, 1994; Limoges, 1987). Yet every year, a large number of workers are unable to continue working or to return to work due to MSD-related pain. Moreover, MSDs rank among the two main causes of short- and long-term work disability and generate major social and economic costs (Wyatt, 2005). For the year 2003, an amount of \$504.6 million was disbursed by the CSST in Québec for spinal disorders alone (both new and long-term) (CSST, 2004). The issue of MSD-related disability was also recognized in the *British Medical Journal* in 2005 (Henderson, Glozier, & Elliott, 2005; Rivero-Arias et al., 2005) as a major public health and economic problem.

Many factors are involved in the development and long-term duration of work disability. Some pertain to the person, workplace, or compensation policies, while others pertain to the healthcare and insurance systems (Krause, Frank, Dasinger, Sullivan, & Sinclair, 2001). In terms of the person, his representation (i.e. understanding of his disease or condition) leads to the adoption of behaviours aimed at adapting to or controlling the problem. A representation is defined as all the thoughts, ideas, beliefs and attitudes associated with the illness. It is constructed in a person's mind as a way of finding meaning in his problem. Studies on illness representation have led to the identification of various themes that appear to enter into this representation. These are (a) the diagnosis and perceived symptoms (Leventhal, Zimmerman, & Gutmann, 1984); (b) the perception of the factors having caused the problem (Leventhal, Diefenbach, & Leventhal, 1992) (c) the course of the illness (acute, cyclic or chronic); (d) the immediate and long-term consequences (Croyle & Jemmott, 1991), and (e) the perception of the control exerted over the illness, including the expectation of results (Bandura, 1977) and of self-efficacy (Bandura, 1977, 1997), and the skills needed to cope with the situation (Leventhal & Diefenbach, 1991). The representation is influenced as much by prior episodes of illness that have been either experienced or observed in others, as by perceived somatic sensations. The social environment, which includes friends, family, health professionals and the media, further influences the representation a person constructs of his problem. Based on all this information, the person generates his own representation of the illness in order to develop a strategy for solving his problem, and ultimately, to evaluate whether his current situation is changing and whether he is moving toward his goal (Leventhal, Brisette, & Leventhal, 2003).

To date, very few studies have documented the impact of health problem representations, not to mention their co-construction by clinician and patient. Dialogue between clinician and patient on the latter's illness representations would above all help the clinician both to understand the patient's behaviours with regard to his treatment and to adjust his own representations in light of this understanding. Such dialogue has an impact on both parties as it is through this interaction that they construct, deconstruct and reconstruct their representation. Unlike patients' representations, clinicians' illness representations have not been investigated, yet based on the studies done of social representations (Jodelet, 1994), it can be postulated that the clinician and patient share the same culture and live in the same times. As such, the clinician's illness representation is subject to the same influences as those of the patient under his charge. Obviously the clinician's expertise is based on representations grounded in professional knowledge, but he nonetheless remains an individual situated in a specific place and time, and is thus infused with the dominant ideals and values of that milieu. His illness representation incorporates professional knowledge into a pool of subjective representations that are sensitive to the input of a social context and that cast a certain colour on the professional knowledge.

The professional training received by the clinician prior to and during actual practice is described as “public” (Jodelet, 1989). The characteristic of a “public representation” is that the person who applies it, in this instance, the clinician, is not the party that produced it. It comes to him via some form of media, such as university courses, to which other professionals also have access. Public representations are therefore shared by other clinicians. The clinician’s disciplinary training and the framework of reference for his clinical practice form the “public” ingredient of his representation. During the rehabilitation process, the clinician’s aim is to convey this public representation to the worker, i.e. to teach the worker how to do the recommended exercises and activities and instil in him the principles of the clinical model to which the clinician himself subscribes. The outcome of the rehabilitation program depends in large measure on how well this public representation is transmitted to the worker, and it can never be done directly. According to Laplantine (Jodelet, 1989), the public representation is not a hermetic entity that is impervious to the context in which it is produced and used. The crossover between the public representation and the user’s affective context always has an irrational overlay. It is therefore in this context that the clinician will try to convey new knowledge to the worker involved in occupational rehabilitation, with the aim of seeing this knowledge incorporated into the pool of representations that are already more or less in place in the worker’s mind regarding this segment of his life.

The worker’s representation may already correspond to the clinician’s representation, hence facilitating the worker’s adoption of the latter. This hypothesis has already been supported in part by work done by Daykin and Richardson (Daykin & Richardson, 2004), who investigated a specific component of representations, specifically, pain beliefs. The clinician’s different understanding of the worker’s representations may cause the worker to feel even greater dissatisfaction with the treatment received. Moreover, his evolution within the occupational rehabilitation program will most often result in a negative outcome (Daykin & Richardson, 2004). If clinician and worker do not agree on the representation, theoretically they will not be focused on the same action plan (Turk, Holzman, & Kerns, 1986).

Studies that have been carried out in different fields and have documented the differences between clinicians’ representations and those of their patients have not elucidated where the differences lie (Cedraschi et al., 1996; Daykin & Richardson, 2004; Sewitch MJ et al., 2002). Is it a question of a difference between the patient’s representation and its interpretation by the clinician, which would mean that the clinician has a poor understanding of his patient’s representations, or could it be a difference between the clinical judgment (the clinician’s description of the problem) and the patient’s representation (which the clinician understands).

Although no studies have yet distinguished the possible differences between clinician and patient representations, there may well be at least three distinct scenarios for these differences. As seen in Figure 1, Scenario A depicts a situation in which the first difference exists between the professional’s clinical judgment and the worker’s understanding of his problem, and the second, between the worker’s understanding of his problem and the clinician’s interpretation of the worker’s understanding. In this scenario, it can be expected that the aims and action plan proposed by the clinician will not necessarily be understood or acceptable to the client, as the two have difficulty communicating. In Scenario B, there would appear to be very few differences between the clinical judgment, the worker’s representation, and the clinician’s understanding of that representation. In this scenario, it is highly likely that the clinician and client will be focused on the same goals and action plan, which in turn promotes the rehabilitation process. In Scenario C, there would appear to be no difference between the worker’s representation and its interpretation by the clinician. On the other hand, the worker’s representation of his problem may be very different from the clinical judgment. For example, the client may perceive his back pain as uncontrollable and as never having been mentioned or diagnosed by a healthcare professional. Based on his

somatic sensations and information obtained from friends, the client may be convinced of the need to have surgery and therefore very reticent to do the exercises proposed by the clinician. The clinician has a good understanding of the client's representation, but does not share it, because in his mind, the client is not a candidate for an operation. The clinician believes instead that it is the client's fears about his pain that induce him to avoid the exercises proposed. To the best of our knowledge, there are no studies to date regarding these different scenarios that provide insight as to whether or not the establishment of common goals and action plans has a definite impact on the rehabilitation process.

Moreover, with respect to differences in understanding, current studies concerning the therapist/client relationship focus on measuring such differences at only one point in time. Yet there appears to be a need to explore changes in clinicians' and/or patients' representations over time. A longitudinal approach would therefore be strongly indicated to further understanding of the various possible differences between clinicians and their clients, and of how these evolve over time.

2. Objectives

The general objective of this exploratory study was to describe, in detail and on the basis of a limited number of cases, the various possible scenarios depicting the differences between clinical judgment, clinicians' understanding of workers' representations, and workers' representations per se, during the occupational rehabilitation process of workers with MSDs. The **two specific objectives** were as follows:

- 1) To describe the difference between the clinician's judgment, the worker's representations and the managing clinician's interpretation of these representations;
- 2) To describe the presence of changes in the clinician's interpretation of the representations held by the worker whom he is managing during the rehabilitation program.

3. Methods

3.1 Design

This pilot study used a multiple case-study design (Yin, 1994) in which each case consisted of a clinician/worker dyad. At present, there is no valid, reliable, change-sensitive dyad measurement tool that allows for the worker's representation and its interpretation by the clinician to be explored. In the fields of sociology and anthropology, representations are seen as part of a social process in which they are constructed over time through interactions with the environment. They are also regarded as being accessible mainly through discourse. Since the goal of this study was to carry out an in-depth exploration of a limited number of cases during a rehabilitation process, a qualitative methodology was used. Given the study objectives, which were exploratory, the data analysis was based on a narrative approach (Yin, 1994).

3.2 Evidence-based interdisciplinary occupational rehabilitation program

The program offered at the research centre of Hôpital Charles LeMoyné is an intensive, interdisciplinary occupational rehabilitation program involving a physician, an occupational therapist, an ergonomist, a kinesiologist, a psychologist, a case manager and a coordinator. Close collaboration is also required with the CSST counsellor, the employer, the attending physician and the worker's social environment, including union representatives, as the case may be. Lasting an average of 12 weeks, this program is built on the Sherbrooke model (Loisel et al., 1997) and is evidence-based (M. J. Durand, Vachon, Loisel, & Berthelette, 2003). The program activities are based, among other things, on the fear and avoidance model (Vlaeyen, de Jong, Geilen, Heuts, & van Breukelen, 2002; Vlaeyen, Kole-Snijders, Boeren, & van Eek, 1995) and are designed to educate and reassure the worker in order to modify his dramatic interpretations (a component of the illness representation). The goal is to reduce the worker's fears and pain avoidance behaviours and encourage the adoption of adaptive behaviours. A distinctive feature of this program is that it includes a therapeutic return to work, i.e. a gradual return supervised by the clinical team (M. J. Durand et al., 2003). The program concentrates on reducing the work disability.

3.3 Recruitment

Subjects were recruited from among workers starting a rehabilitation program at the Hôpital Charles LeMoyné research centre, within the context of a research project on workers' representations that was completed in 2007 (the project was entitled *The impact of representations of the disease, pain and healing on the work rehabilitation process*, referred to hereafter as the "Healing project"). Funded by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST), the project studied the impact of illness, pain and recovery representations on the occupational rehabilitation process of workers with musculoskeletal disorders (Baril et al., 2008). The general objective of that project was to describe the psychosocial mechanisms, specifically the representations, underlying the behaviours exhibited by workers during a rehabilitation program. The **inclusion criteria** for the current study were (1) have an MSD that was accepted and compensated by the CSST and that had resulted in sick leave of more than three months; (2) be between the ages of 18 and 64; (3) be able to speak French; (4) be entitled to return to work at their employer's; and (5) be on a first long-term sick leave attributable to an MSD. The following exclusion criteria were applied: (1) an MSD related to a specific pathology (e.g. recent fracture; metabolic, neoplastic, inflammatory or infectious disease of the spinal column), and (2) the presence of severe mental disorders identified in the medical file. The current project was presented to each worker recruited for the Healing project. With the worker's consent, we then requested the participation of the clinician most involved in the gradual return to work. Interviews were conducted with each worker at four points in time during the program. These points had

been identified as crucial through application of criteria used in a project conducted prior to this study (M J. Durand, Loisel, Charpentier, Labelle, & Hong, 2004). The four points in time were (1) the start of the management process by the interdisciplinary team; (2) when the announcement was made that it was time to return to the real workplace; (3) when the workers had resumed working 80% of their regular work hours; and (4) one month after completion of the rehabilitation program.

During recruitment, the rehabilitation team consisted of three occupational therapists, one ergonomist, one kinesiologist and one psychologist who was likely to be a key player during the return to work. The clinician's consent to participate was requested for each new dyad. Each clinician was seen at the same points in time as the workers, except for the one-month post-program-completion date, since the clinician was no longer in contact with the worker.

The aim was to recruit 12 dyads. The data for each dyad therefore came from two sources: interviews conducted with 12 workers and interviews conducted with five managing clinicians who were sharing the management of 12 cases. No statistical method exists in qualitative research for determining the number of participants required. According to Sandelowski (1995), a sample of around 12 participants is sufficient for a pilot project that is relatively homogeneous.

3.4 Interviews of clinicians and workers

The semi-structured interviews of each member of the dyads were conducted by independent interviewers. This limited the risk of the interviews being steered toward the worker's representations. Also, the term *problem* rather than *pain* or *disability* was used to prevent the interview from being directed toward specific points. The same questions were essentially raised from one interview to the next. If the clinician or worker's discourse changed without their necessarily being aware of it, it was therefore possible to ascertain the change over time.

The worker interview guides were described in the research report on the Healing project (Baril et al., 2008). The clinician interview guides were built on the basis of the worker interview guides. However, the structure was changed in order to explore, first, the clinician's understanding of the representations held by the worker under his care, and second, his clinical judgment. To avoid channelling the clinicians toward our exploration target, i.e. the joint establishment of goals and an action plan, they were questioned about the factors that helped or hindered the occupational rehabilitation process. These interviews were audiotaped and lasted an average of 60 to 90 minutes. They took place at the occupational rehabilitation clinic of the Hôpital Charles LeMoyné research centre.

More specifically, the interview guides broached the following topics and questions:

- Evaluate the clinician's interpretation of the worker's representation and his clinical judgment at the start of the management process:
 - The topic of representations: "What problem does the worker say he is here for? What makes him say this? According to the worker, what caused his problem? Does he think it is a serious problem?" "And what is your opinion?"
 - Relations with the partners involved: "Regarding the worker's relations with the CSST, the workplace or the attending physician, are there factors, according to the worker, that help or hinder his situation?" "And what is your opinion?"
 - Adaptive strategies: "What helps him to control his problem or make it tolerable? According to the worker, how should the rehabilitation program help him?" "And what is your opinion?"

- The impact of the social environment on how the worker experiences the problem: “Are there factors in the worker’s social environment that, according to him, help or hinder his problem?” “And what is your opinion?”
- Evaluate the clinician’s understanding of the worker’s representations and his clinical judgment during the follow-up interviews:
 - The topic of representations: “According to the worker, what is his problem now? What makes him say that? What does he think is the cause of his problem now? Does he see it as serious?” “And what is your opinion?”
 - Relations with the partners involved: “Regarding the worker’s current relations with the CSST, the workplace or the attending physician, are there factors, according to the worker, that help or hinder his situation?” “And what is your opinion?”
 - The therapeutic process and perception of recovery: “Does he think his problem has improved or gotten worse? What does he think is needed to solve his problem?” “And what is your opinion?”
 - Adaptive strategies: “What helps him to control his problem or make it tolerable? According to the worker, how should the rehabilitation program help him?” “And what is your opinion?”
 - The impact of the social environment on how the worker experiences the problem: “According to the worker, are there or were there factors in the social environment that help/helped him? Are there factors that hinder/hindered him?” “And what is your opinion?”

4. Data analysis

The interviews were transcribed and the transcripts underwent a first analysis using the content analysis software Atlas/ti. This thematic analysis was conducted using a list of topics chosen in advance on the basis of those used in the self-regulation model of illness (Leventhal et al., 1980) and of the results of a critical review we conducted of the medical anthropology, psychology and health sociology literature (Coutu, Baril, Durand, Côté, & Rouleau, 2007). On this basis, an analytical guide setting forth sufficiently clear and detailed coding rules was developed to ensure that the four individuals doing the coding had the same understanding of the topics covered from one transcript to the other. The content was analyzed using the Landry method (1997), which involves the following five steps: (1) determining the objectives of the content analysis; (2) conducting pre-analysis; (3) analyzing the material studied; (4) evaluating data reliability and validity; and (5) analyzing and interpreting the results. A first analytical guide was developed and then pre-tested to ensure that the criteria were clear, relevant, exclusive and reliable. The initial rate of agreement between coders was not optimal, so an improved version was developed and re-tested (Landry, 1997). These steps were repeated until a 95% interrater reliability rate was obtained. Then, two coders coded the interviews for each member of the clinician/worker dyad. The advantage of proceeding in this way was that it helped identify potential problems associated with the coding process and pointed to solutions for increasing the level of reliability (Landry, 1997). This proved all the more important as new codes emerged during the analysis that provided a better reflection of what had been observed. The material that emerged from the interviews conducted with each member of the dyad was analyzed by means of a thematic coding system, this time, developed after, rather than before, the interviews.

The first step in the analysis of the worker interviews was carried out in the context of the Healing project. During the next step, i.e. analysis and interpretation of the results, the results of the analyses of the clinician interviews were juxtaposed with the results of the analyses of the worker interviews.

Given the limited number of dyads, the generic masculine has been used in the citations taken from the selected workers and clinicians to illustrate our analyses in order to protect the identity of the speakers.

5. Results

5.1 Characteristics of the cases studied

Each case in this study consisted of a clinician/worker dyad. The average age of the workers was 40 years (it ranged from 25 to 65 years). All the workers were on prolonged disability, and the average time elapsed between their accident and admission into the rehabilitation program was 13 months (it ranged from 8 to 25 months). Nine workers had manual occupations; one worker had a non-manual type of occupation, and two other workers had occupations considered to be mixed (Hébert, Duguay, Massicotte, & Levy, 1996). Equally varied were the medical diagnoses, which were grouped into three main categories: disorders involving the upper extremities (n=2), the back (n=8), and both the back and an upper extremity (n=2). Five clinicians participated in the interviews. The average age was 31 years. One clinician had training in both ergonomics and occupational therapy. Three others had training in occupational therapy, and one other had training in kinesiology. The number of years of experience ranged between 4 and 21.

At the end of the rehabilitation program and at the one-month follow-up, seven workers were back at work full-time while five were not back at work at all due to their work disability. The program lasted an average of 10.45 weeks (the duration ranged from 4 to 16 weeks). Of the workers in the non-return-to-work category, three faced a contestation of their case by their employer and one worker's employment relationship had ended.

5.2 Dyad analysis

The overall results of the analyses in this study brought to light various scenarios for the differences between the clinician and the worker undergoing rehabilitation. Of the three hypothetical scenarios described earlier, Scenario A did not occur in the cases studied. The analyses of all the cases investigated in this study revealed that the clinicians had varying degrees of understanding of the workers' representations, ranging from full to limited or no understanding. The latter problem was due to the difficulty of accessing the worker's representations. Two new scenarios (D and E) thus emerged: one in which the clinician was unaware of or had only a fragmentary understanding of the worker's representations; and a second in which his clinical judgment targeted variables that were harmful but not modifiable within the constraints of the program. Table 1 shows the observed frequency of the clinician/worker dyads corresponding to each scenario and to return/non-return-to-work status at the end of the rehabilitation program.

Scenario	Case frequency	Dyad	Work status
A	0	n/a	n/a
B	1	wkr. P - clinician 02	RTW
C	6	wkr. M - clinician 01 wkr. O - clinician 02 wkr. Q - clinician 01 wkr. U - clinician 01 wkr. V - clinician 01 wkr. X - clinician 04	RTW
D	2	wkr. T - clinician 05 wkr. W - clinician 01	N-RTW
E	3	wkr. N - clinician 04 wkr. R - clinician 01 wkr. S - clinician 01	N-RTW

Table 1: Dyad frequency corresponding to the different scenarios and to return/non-return-to-work status

5.2.1 Scenario B

Of the seven dyads in which the workers returned to work, only one corresponded to Scenario B. This scenario describes an ideal situation in which there is no, or very little, difference between the clinical judgment, the clinician's understanding of the worker's representations and the worker's actual representations. In other words, it exists when the clinician has a good understanding of the worker's representations, which also concur with his clinical judgments. Scenario B was a rare occurrence in this study, probably because it requires the worker to have an *a priori* representation of his own problem that is congruent with the principles underlying the planning of the activities prescribed in the intervention program. In the first citation below, the Scenario B worker describes his representation of the problem, which concurs with one of the basic principles behind the intervention, i.e. maintenance of physical activity.

Worker:

"He [the attending physician] gave me some cassettes on the exercises and stretches I had to do. I wasn't supposed to stay inactive; he told me specifically to get psychological support. The other doctor [from before] never talked to me about that. He just said that things would work out with time and he used to give me pills. Things got worse." (Worker P, Interview 1, RTW)

The worker also included in his definition of the problem some of his own representations that he recognized needed to change in order for his condition to improve.

Worker:

"...from the time we're this tall, they [parents] tell us that when we hurt ourselves or when we're sick, if we're able to do our leisure activities, we're able to work. Well, I wasn't able to go to work, so [in my mind] I didn't deserve to do my leisure activities. But the psychologist here told me that if I do my leisure activities, they will also help me relax ... For 32 years, the opposite was drilled into my head, so it's going to be hard, but you know, I have to change the way I think if I want things to get better." (Worker P, Interview 1, RTW)

In this instance, the goal and strategies appear to have been defined jointly by the worker and clinician, to such a point that during the interview, the clinician sometimes had a hard time distinguishing the source of what he was saying, i.e. whether it was his own representation or the worker's.

Clinician:

"[Interviewer: From his point of view, what's causing his problem?] He's more afraid of himself, of his own reactions, than of others... [Interviewer: And from your point of view, what's causing the problem?] Uh, what's causing the problem? I would say, I mean, listen, I feel like I've already answered that. Because his perception..." (Clinician 04, Worker P, Interview 2, RTW)

According to the clinician, what helped facilitate the rehabilitation process was how readily the worker agreed to apply the proposed strategies and how easily he could be refocused on the goal when he seemed to be moving away from it. Although it was not necessarily pleasant for the worker to be brought back on track, he nonetheless recognized the soundness of the clinician's intervention.

Clinician:

"So like I was saying, he's an intelligent person with an ability to introspect. He won't say no to the clinical opinion I'm expressing; he'll just have some difficulty swallowing it, that's all. But he won't put it down. He'll think I'm right in a way, you know." (Clinician 04, Worker P, Interview 2, RTW)

Worker:

"... I used to clench my teeth and look [at the clinician], I wanted to smash him into the wall. And well, he knew it. So when he would try to motivate me, I just stared at him and said to myself, 'You know you're just wasting your time; you don't even know how much, you know.' But in the end, you know, when I learned everything else, I said to myself, 'Hey, you know what, it's not such a crazy idea after all, it actually makes some kind of sense,' you know. And especially when you see that things are starting to change. You tell yourself that maybe he's [the clinician] not wrong after all, you know... Then you give it a shot [what you learned], you try applying it again, and you keep seeing better and better results, and finally, you say to yourself that he was right." (Worker P, Interview 3, RTW)

In the end, the rehabilitation process gave the worker a means of achieving his goals through the use of the various intervention strategies offered within the rehabilitation program. Right from the second interview, the worker mentioned the positive effects of applying his strategies. Among other things, this helped him see that he was able to manage

anxiety-inducing situations, such as the gap between his current functional capacities and his high performance expectations at work.

5.2.2 Scenario C

Most of the dyads in which the workers were back at work at the end of the program and at the one-month follow-up corresponded to Scenario C. This scenario involves an initial situation in which the clinician has a good grasp of the worker's representations, as in Scenario B, but where the worker's representations do not concur with the clinical judgment. At the beginning of the rehabilitation program, all these workers identified the presence of pain as a problem. The pain-related causes they cited were essentially physiological in nature (muscle weakness, wear and tear on bones, fragility, etc.). By contrast, the clinicians' representations, which concurred with the principles of the rehabilitation program, highlighted the multidimensional causes of the work disability problem. In the following example, the clinician reveals his interpretation of the worker's representation at the very beginning of the program. This interpretation is identical to the one described by the worker himself, as seen in the first two citations. However, the third citation, when the clinician is asked about his clinical judgment, reveals a difference between his representation and the worker's, because the clinician sees a psychosocial aspect at play, such as a factor that serves to maintain the worker's work disability.

Worker:

"... I don't sleep at night because of the pain. It hurts 24 hours a day. Even touch hurts. So even if I pick something up or open a door, I hurt, but the main thing is that it prevents me from sleeping. In August 2005, I saw my doctor and asked him to give me something to help me sleep so that I would be able to get through the next day." (Worker X, Interview 1, RTW)

Clinician:

"What's strange about this fellow is that before the program began, he used to say to me, 'I'm not working because I have a problem with sleep; it's because I don't sleep that I'm not working.' But he had epicondylitis, so he had a problem with pain, but... for him, he says, 'I could work, you know, except that I don't sleep.'" (Clinician 04, Worker X, Interview 1, RTW)

Clinician:

"First, he takes too much medication; he's not even able to drive to work. Second, I think he wouldn't even be able to concentrate on a task, really not for very long because he takes a lot, a lot of medication." (Clinician 04, Worker X, Interview 1, RTW)

Apart from the differences related to the problem itself and its causes, nearly all the dyads also presented a difference in terms of the perception of the problem's severity at the beginning of the program. In fact, the worker's perception of the problem and its severe consequences was never agreed to by the clinician. If the clinician perceived any severity, it was more at the level of psychosocial factors, such as the severity of the fears and the anxiety. The following citations provide examples in which the clinician understood the worker's perception of severity, but had a different clinical judgment.

Clinician:

“He’s convinced that there’s something seriously the matter with his spinal column. But his diagnosis is only a cervical/thoracic/lumbar strain. But in his mind...it’s his whole spine. His representation [of the problem] is much bigger than the reality; he understands that it goes from his head right to his pelvis, which means that it’s serious. That’s the message he gave me. Since he arrived here, however, we can see that that is not necessarily the problem. It’s rather that this fellow is very, very, very anxious... that’s the problem. [Interviewer: From your point of view, does the worker have a serious problem?] No. No. I think that it’s more his fears, that he is more in the avoidance phase. He’s afraid. He’s simply afraid of returning to work...” (Clinician 03, Worker V, Interview 1, RTW)

Worker:

“Well, it’s because I’m not able to go back to work because I have cervical, lumbar, thoracic, cervical pain... I mean, it’s my whole spine... I fell on my back.”

“There was always something that wasn’t right. If I stood up for too long, it hurt; if I sat down for too long, it hurt... so I had to change position... I couldn’t keep up when I was walking with someone... For sure, at the beginning, walking was very difficult. But it’s like you’re going into a whirlpool, at some point, that you can’t get out of... you’re... you’re messed up, but... it’s like you’re even more messed up because, you know, it affects everything, it stirs up all these pains again, and... that makes it worse.” (Worker V, Interview 1, RTW)

The fact of properly interpreting the worker’s representation enabled the clinician to formulate specific, concrete goals in order to make a return to work possible. Thus, if a clinician identifies a worker as having a fear of injury associated with the thought of returning to work, the goals the clinician will propose will focus on reducing the avoidance behaviours and on changing the worker’s representation of the causes of his problem. The following example reveals that the worker learned, through physical training, to reduce his fear of pain, while at the same time becoming aware that good physical fitness helped him to reduce his pain.

Worker:

“[Interviewer: So what is it that helped you here?] Well, getting back into shape helped me quite a lot. Because here, I’ve worked pretty hard, and I’m still finding it difficult, but if I hadn’t had the kinesiologist and the other people here, it would have been a lot more difficult than it is now. And then the gradual return [to work], that helped me.” (Worker U, Interview 3, RTW)

Clinician:

I think that the fact of having someone who takes him by the hand and helps him return to work, and then who prevents him from getting into avoidance behaviours, who obliges him to look at himself straight on, but who stops him from charging ahead at 100 miles an hour with his eyes closed, straight into a wall... I think that... for me, it's that... that's... the most important part, in this particular case.” (Clinician 01, Worker U, Interview 2, RTW)

Regarding changes during the rehabilitation program, in this scenario, it is the worker's representation that changes and moves closer to the clinical judgment, and sometimes as soon as during the first two weeks of the program. The strategies proposed by the clinician are designed to help the worker progress in terms of his handling of the problem and to change his representation of the problem. The next citations illustrate such changes in the worker's representation. According to the clinician, this change was due to the fact that the worker adhered to the principles of the program and put into practice all the tools proposed to him.

Clinician:

“I think that his representation of the problem...that it's only a sleep problem, I think that's what's starting to change. It's starting to change a bit... You know, even if we're just at the beginning, you know...” (Clinician 04, Worker X, Interview 1, RTW)

“[Interviewer: What is it that's helping him manage his problem?] Well, you know, he is a person who understands, who makes connections, and who uses the tools we give him. Mostly I think he was able to understand his pain better. He's a person who stuck to our recommendations, and who sees things and makes connections between what he's experiencing, what he's feeling...” (Clinician 04, Worker X, Interview 2, RTW)

Worker:

“I'm not saying I'll never feel pain again. No. Because it could happen that I might make movements, you know, even if, unfortunately, things like stress happen, but I have... my sheet [of exercises], they're at work ... I've got my sheets on my fridge, in my bag, in my room, and my child even does exercises with me. That was absolutely the greatest day for me.” (Worker X, Interview 3, RTW)

5.2.3 Scenario D

Of the five dyads in which the workers did not return to work, two corresponded to Scenario D. Unlike the two preceding scenarios, Scenario D describes a situation in which the clinician has very little knowledge of the worker's representation of his problem, and which the clinician therefore describes in strictly physiological terms. As the worker's representation is difficult to access, the clinician may find it difficult to identify a goal congruent with this representation. The phase of the program that takes place in the clinic, i.e. during the first few weeks, can, however, give the clinician an opportunity to observe the worker's behaviours and to glean information he did not have at the beginning of the program. Here is a citation from one clinician who explains his understanding of one worker's representation.

Clinician:

"[Interviewer: So according to the way he sees things, what problem is he here for?] A problem of back pain, caused by a herniated disc. [Interviewer: Does he have a representation as to how all this happened?] Ah, yes. It's related to the work accident. It's an event that he sees as insignificant, but as having disastrous consequences, but I don't know... It's not clear to me. I think there's something bigger going on... We've got a few theories about why this has taken on such big proportions, but... I would say they're just theories." (Clinician 01, Worker W, Interview 1, N-RTW)

Based on this information, the clinician identified a personal, work-related or administrative factor that could hinder the outcome of the program and on which he could base himself to identify a goal congruent with the problem identified. Although the strategy he implemented may have been agreed to by the worker, this was not necessarily the clinician's initial aim. However, the strategy had to have a positive impact on the worker's behaviours. For example, the clinician observed that the worker had the goal of becoming physically active again and the ability to do so. Yet in the clinic, the worker did not take any action. After observing this situation, the clinician hypothesized that the worker was in a social and family situation where, if he were to become active again from one day to the next, he would have risked losing face in everyone's eyes. This theory is based on the fact that this worker stopped all activity because of his pain and that he had received considerable help from family and friends. Without discussing this theory with the worker, the clinician implemented a concrete strategy for circumventing this new problem.

Clinician:

"His problem? I think his back really hurts him, but that it has taken on absolutely disastrous proportions in his life. Then to justify to other people why he is doing nothing, well, obviously, that included a whole set of pain-alleviation behaviours completely disproportionate to a situation like his. And I think this was the only way he found to justify why he was doing nothing when before he used to do everything. But I think that this fellow has good potential and that if he [does not become active], it will have disastrous consequences. He wants to [become active again], but we have to find a way he can [do so] without losing face. (Clinician 01, Worker W, Interview 1, N-RTW)

The occupational therapist went from the clinic to the worker's house to help him learn how to function very gradually. The goal was to justify this reactivation in the eyes of others by including an important therapeutic feature: the presence of a clinician in the home. In the following citation, the worker expressed his reaction to the idea of doing his occupational therapy at home.

Worker:

"I used to do the occupational therapy here, but now I'm going to do it at home. So [the clinician] is going to come to the house. Because since I stopped doing all the work around the house, like my flower beds, my flowers... I have a hard time leaning over, it's hard... it hurts too much, but I have to go about it gradually, so he's going to come to the house to show me how to function with... I don't know, I guess, maybe the swimming pool or the lawn mower." (Worker W, Interview 1, N-RTW)

The essential requirement of a clinical theory based on variables other than those reported by the worker is that it be possible to develop an intervention strategy to address these

factors within the confines of the rehabilitation program, and that the strategy be acceptable or at least make sense to the worker. It is not necessary to eliminate the new factor deemed to be harmful. It may be a matter of sidestepping it so that it no longer poses a significant obstacle to the rehabilitation process. In the following dyad, the clinician observed a major increase in the worker's anxiety when it came time to apply the lessons learned in the clinic to his workplace. This anxiety hindered him to the point that he was unable to apply the strategies learned in the program. The following citation thus provides another example of a factor addressed indirectly by the clinician without revealing it to the worker, in order to help the worker transfer to the workplace what he had learned in the clinic. The second citation, which is the worker's, reveals his satisfaction and the decrease in his fears.

Clinician:

"At work, I noticed that... when we were actually on the premises, there was simply too much information for him to handle. How was he to manage his pain, how was he to manage his energy, how was he to manage his tasks and solve problems on the spot?... I have the impression that I was overwhelming him with information..."

So I tried to reassure him with words, then with principles, in order to explain to him, but all I sensed was that he was getting more and more nervous. He was less and less focused on what he was doing, he was concentrating less and was less attentive... he just didn't know what to do any more.

One way I found to make him feel more secure at work was to tell him that at work, he was not working but was doing his occupational rehabilitation program. Then I made him a rehabilitation program like the one he used to do in the clinic, but that was adapted to the workplace, and I put it in writing. So what I really did was I put together a framework, and thank goodness, it reduced his tension level. I sensed a drop in his resistance when I gave it to him. So this made the therapeutic return-to-work experience easier to handle and gave him a feeling of control over what he was doing, and at the same time, I felt that it reassured him." (Clinician 05, Worker T, Interview 2)

Worker:

"Last time [the clinician] came with me to work. I did two hours straight, with no break, nothing. [Interviewer: And then?] I was tired. And yes, the pain came back. Yeah, I was tired, but I did it. [Interviewer: Do you think you could have gone ahead and done three hours?] Yeah, I think so. The program they gave me here is good for me. For me, it's always good. Mainly physically. It's good." (Worker T, Interview 3)

A change in the intervention approach, without broaching the representations directly with the worker, can nonetheless have an impact on him, in such a way that he starts to benefit from the tools proposed.

What about the worker's goals once the first obstacle to the program had been dealt with? The problem that confronted the clinicians in the two Scenario D cases was that the workers did not formulate truly specific goals. There appeared to be a general goal implicit within the dyad, i.e. the goal of the program: a return to work. However, analysis of the transcripts does not reveal any clear agreement or disagreement from the worker regarding this goal. Only the desire to recover or to eliminate the pain persisted over time, which was not a goal recommended by the program. According to the clinicians, the absence of a specific goal may have been attributable to substantial fears of suffering a relapse, but also to fears about

an employer contestation and/or the logistical challenges involved in a therapeutic return to work. The following citations provide examples of questions the clinicians asked themselves about their workers' goals.

Clinician:

"What's his goal, I wonder? I really don't know. And I'm not sure he knows either. I think he'll tell us what we want to hear. But I think it's still not clear to him yet..." (Clinician 01, Worker W, Interview 2)

Clinician:

"What the worker wants is to be able to find himself a job again. [Interviewer: And what do you think of that goal?] Well, I don't know if it's realistic... in the sense that I don't know if he's going to be able to regain confidence. It's hard and I just don't know. Things could swing to the side of work or they could swing to the side of fear... No. It's not clear [for me], but it's not clear for the worker either, I think. I think that that's why it's not clear for me." (Clinician 05, Worker T, Interview 2)

It may be that the goal of returning to work diminishes as the problems related to the workplace worsen, as illustrated in the following two examples.

Clinician:

"They reorganized the plants, and then abolished his job. He would have been cut if he had stayed there and not been injured. He would have been laid off ... That's why they put together a piecemeal job, a job that the worker sees as being much less demanding than what he used to do before. So that's a plus for us. But at the same time... it creates a big feeling of insecurity because... does it mean that his salary will go down? What happens if the company where he used to work closes? What will happen if they fire him during the company restructuring? Will that lead him to suitable employment? What will the impact be? The whole administrative aspect is not clear." (Clinician 05, Worker T, Interview 3)

Clinician:

"He gave me some positive reasons for returning to work. But at the same time, he is so bitter and sour about that employer. I hear about all the other irritating things and disappointments he has experienced over the years." (Clinician 01, Worker W, Interview 2)

In summary, the clinicians in this scenario had little access to the workers' representations, but on the basis of observation, they nonetheless managed to identify a factor that hindered the rehabilitation process. A goal and strategy were then worked out to reduce the negative impact of this factor. In both dyads, a behavioural change took place that worked in favour of a resumption of activity. However, for the two workers involved, employer-related administrative constraints terminated the program prematurely. These workers did not go back to work at the end of the program.

5.2.4 Scenario E

Three of the five dyads in which the workers did not return to work correspond to Scenario E. This scenario involves a situation in which the clinician's interpretation of the worker's

representation is fragmented. Also, the clinician mentions having little opportunity to identify a concrete (as in Scenario D) harmful factor during the rehabilitation process that would have made it possible to tip the worker toward a return-to-work trajectory.

Clinician:

“[Interviewer: What he is asking you to do is get rid of his pain?] Yes. This is a fellow who has no pain when he doesn’t move. That’s what’s a bit hard. He wants us to get rid of his pain, but he has no pain when he does nothing. So in fact, he wants us to get him active again, but insists that it mustn’t hurt. I’m sort of stuck, you know.” (Clinician 01, Worker R, Interview 1, N-RTW)

In the following dyad, a comparison of two excerpts from the transcript reveals the differences in the worker’s representation of the problem and the clinician’s clinical judgment.

Worker:

“[Interviewer: What problem do you think you are here about today?] I’d say my back problem. I have a hard time staying standing up. That’s about the only problem I have, but I consider it to be pretty major. [Interviewer: Okay. And what makes you say that it’s major?] I have no endurance when I’m standing, walking, things like that... after 30 minutes, I have to sit down; I have to take a break because my back just seizes up, my leg goes numb, and then if I continue forcing myself, well, then what happens is I lose my balance. And it’s like I have no more strength in this leg. My balance is affected, so to speak. Yeah. Overall... in my mind, that’s why I’m here.” (Worker S, Interview 1, N-RTW)

Clinician:

“I think this is a fellow who finds persistent pain unacceptable. This fellow is a performer. He talks about others in disparaging terms. His way of doing things is always better... Here, I had to negotiate with him to get him to use the tool. For him, it’s so humiliating that this would be reason enough for him to quit if an employer were to ask him to do this. You know, this is a guy who seems to me to have very poor self-esteem, who’s really concerned about performance and comparisons. And I think that just the fact of not being able to perform or the fear of being unable to perform, for him this is enough to make him not to want to go back [to work]. In this sense, I’m not sure whether he will succeed.” (Clinician 01, Worker S, Interview 1, N-RTW)

Throughout the program, in this scenario, the definition of the problem and the worker’s objectives remained unrealistic and focussed on making the pain disappear and looking for an explanation for its persistence. The goals and strategies proposed by the clinicians to promote a return to work were not acceptable to the workers. Unlike Scenario D where the proposed learning started to become useful once strategies congruent with the worker’s problem were applied, the effect of the learning was not the same for the workers in Scenario E. The workers also mentioned a certain dissatisfaction with the program, particularly the emphasis placed on the psychosocial dimensions and the return to work. The following citations illustrate a disagreement with the objective of returning to work. The second citation comes from a worker who was not confident that he would receive the appropriate treatments in the program nor convinced that it would help him with his pain.

Worker:

[Interviewer: How do you see yourself at the end of this program?] *"I'd like to see myself get back to work, and then see that it all works. That's my priority, but... I have to be realistic. We'll see as time goes by. I mean, in my view, it's going to take a miracle... For sure I baulk a bit about returning to work when they talk about it with me here, but you know, they want... they want me to try to start working, but... [Interviewer: What do you mean?] I mean, that since I began here, that's the idea they keep pounding into my head, you know. Back to work, back to work. No problem, we'll get there. [Interviewer: But...?] But they're going to see that it won't work. It's that simple."* (Worker S, Clinician 01, Interview 1, N-RTW)

Worker:

"...they're not doctors here. They don't know exactly everything that is going on inside the bones, you know, so... so they can't really know exactly what it is. Personally, I see their thing as a little vague. It's like... They're basic exercises, and I've already done them. I've already done all the exercises they give me here. I'm even at the point where I'm in a strengthening stage. [Interviewer: And at the present time, are there any things that hinder your rehabilitation process?] No, but things could be better, like I was saying, but I'm not too much of an expert. I don't know what exactly..." (Worker R, Interview 2, N-RTW)

The next example illustrates how the clinical judgment can change during the program, but also confirms the difficulty of trying to act on a psychosocial variable that is not acknowledged by the worker.

Clinician:

"He's tall, has a strong build, and is athletic. So the fact of going back and being less good than the people he used to look down on before, I don't think that will be acceptable to him, you know what I mean. So... I think that we're going have to watch out for that, to find a way to make it acceptable to him that he just go for two hours or that he not do all his tasks, and that he take a break when he needs one." (Clinician 01, Worker S, Interview 1, N-RTW)

Clinician:

"Why isn't he at work? Mostly what limits this worker is his anger and then rage. A lot of it has to do with having a conflictual relationship with the employer. [Interviewer: Is that really how you see it?] Well, yes and no. After he and I spoke about it, he was absent for the next week. And then when he came back, his attitude had changed. He was furious... so, yes, we saw from the way he reacted that, yes, he's aware of it, but no, he absolutely does not want to look at this issue for the time being." (Clinician 01, Worker S, Interview 3, N-RTW)

Clinician:

"According to him, he was here for a problem of pain, but... was he coming for the back pain or because he was expecting other options? He was coming just because of the counsellor who had told him to come. You know, why was he really here? Was it to solve this problem or was it because he was expecting other people to solve it for him? I think he was really waiting for a medical

solution, but that was not what we were offering him.” (Clinician 04, Worker N, Interview 1, N-RTW)

In summary, it appears that in Scenario E as in Scenario D, all the clinicians had little access to the workers' representations. It was therefore difficult for them to identify a specific and/or pragmatic factor that was harmful to the rehabilitation process. In addition, the strategies developed by the clinicians did not yield the results they expected. And, the workers who fit into this scenario expressed their disagreement with the program objective and did not mention an improvement in their problem.

6. Discussion

The general objective of this exploratory multiple-case study was to describe in detail, based on a limited number of dyads, the various scenarios depicting the differences between clinical judgment, workers' representations, and clinicians' interpretation of them. The project was carried out during the workplace rehabilitation process of workers with long-term disabilities of musculoskeletal origin. The first observation made was that Scenario A was not present among the dyads studied. The clinicians who participated in this study form part of a team at a research centre applying clinical principles based on evidence-based data (M. J. Durand et al., 2003). Moreover, they have been investigating the concept of representations for a number of years. We therefore believe that these clinicians are more aware than others of the importance of understanding workers' representations. On the other hand, it may be possible to find Scenario A among clinicians who do not know the importance of representations. It may also be that some clinicians know the importance of identifying the representations at play, but that they decide not to integrate them into their interviews due to lack of time or lack of self-confidence.

In Scenario B, the clinicians knew the workers' representations, which did not differ from their own clinical judgment. In such cases, it was possible to develop an action plan with the worker because open communication existed between the parties, and the problems were revealed by the workers and acknowledged by the clinicians. The progress made during the program was recognized by the workers and served to reinforce their adaptive behaviours. In Scenario C, the clinicians were also aware of the workers' representations. However, there was a difference between these representations and the clinical judgment. A joint action plan was nonetheless implemented. The lessons learned by the workers yielded positive results, which in turn helped them maintain their behavioural changes as well as the change in their representations. In Scenario D, the workers' representations were inadequately or not at all understood by the clinicians. To sidestep this obstacle, observation of the workers during the clinical phase made it possible to identify a factor possibly hindering the rehabilitation process. From there, the clinicians were able to set a specific intervention objective. The strategies implemented by the clinicians made sense to the workers. These positive results in turn partly changed the workers' representations; however, a termination of the case management process for administrative reasons partly changed the workers' representations, whereas a termination of the management process for administrative reasons resulted in the workers in Scenario D not returning to work. In Scenario E, the workers' representations were also poorly understood by the clinicians. However, in this scenario, the clinicians did not succeed in pinpointing a specific intervention objective attainable within the rehabilitation program. The objective of the program, namely, a return to work, was not a goal shared by the workers. Also, the workers in this scenario mentioned their dissatisfaction with the program. If any progress was made, it was identified solely by the clinicians.

The results of our study therefore corroborate in part those obtained in the Daykin and Richardson study (Daykin & Richardson, 2004) involving physiotherapists. However, our study also reveals that not all the differences necessarily have a negative impact on the outcome of the rehabilitation program. When differences exist between the clinical judgment and the worker's representation, it appears that it is unnecessary for the clinician to share all the information concerning his clinical understanding. Scenarios B and C indicate that the difference can also be addressed directly, and that the worker's representations will become more congruent with the principles underlying the intervention. In other instances, the representations will be addressed indirectly through the implementation of a behavioural strategy instead. What emerges from the analyses is the importance for the worker of congruence between the strategy and his representation. For the clinician, what is important is that the problem be clearly identified to allow for the use of concrete, pragmatic strategies. The results thus concur with the recommendations made by Barnes and Ward (Barnes &

Ward, 2000) regarding the importance of establishing specific, measurable, attainable and/or client-centered goals. In addition, a comparison of the scenarios in which a return to work occurs (B and C) to those in which it does not (D and E), underscores, among other things, the importance of the goals making at least minimum sense to the worker and of establishing common goals. The results do not point to any difference in the outcome whether it is the clinician or the worker who decides on the goals.

In different healthcare fields, shared decision making has been adopted as a model of best clinical practices, (Ford, Schofield, & Hope, 2003; Holmes-Rovner & Rovner, 2000). The most frequently cited definition, according to Makoul and Clayman (Makoul & Clayman, 2006), is that given by Charles et al. (Charles, Whelan, & Gafni, 1999), specifically, a relationship between patient and clinician involving an exchange of information, the expression and discussion of preferences, and agreement on the goals and action plan required, followed by an evaluation and readjustment of the plan. In the field of physiotherapy, a pilot study using this approach revealed positive results in terms of patient functioning and satisfaction when compared to a control group (Arnetz, Almin, Bergstrom, Franzen, & H., 2004). This study was conducted on a population with rheumatoid arthritis problems and for whom it was impossible to know whether they had a disability in the workplace. Also, the treatment objectives focused exclusively on functional capacity, and in this sense, corresponded more closely to a biomedical perspective. Although our study supports the importance of reducing the differences between clinicians and their patients, our results also bring to light a bigger difficulty: that of establishing common goals in cases where the return to work is not realistic and where the factors contributing to the work disability concern the psychosocial sphere rather than functional capacities and physical condition.

Very few studies have dynamically and prospectively documented the difference between workers' illness representations, clinicians' understanding of these representations, and their own clinical judgments during the work rehabilitation process. With regard to the methodology used in this study, the multiple-case study design offered a means of conducting an in-depth exploration of a specific phenomenon. This study did not seek to attain statistical representativity, but rather to describe the phenomenon in depth, for a limited number of cases. Moreover, the use of interviews to collect data yielded a wealth of information. In fact, the interviews brought to light new material as it emerged, making it possible to delineate two new scenarios for the differences. On the other hand, the interviews may also place certain limitations on the study, including the social desirability bias. In order to reduce the impact of this bias, the interviewer involved was someone independent of the rehabilitation process. Explicit mention was also made of the confidentiality of the interviews. For the purpose of limiting the reflexivity bias, the questions were developed in such a way as to limit the risk of implying the answers. Our questioning of the clinicians during the rehabilitation process may have led them to question the workers more about their illness representations. The aim of the study was not, however, to verify whether the clinician documented the representations as part of his practices, but rather to observe the impact of the differences in understanding in the clinician/worker dyad.

Regarding the interview content analysis, several people can interpret the same element differently. To control this phenomenon, the note-taking procedure was standardized and the teamwork approach adopted during data collection and analysis. Two evaluators analyzed the data, which allowed interrater agreement to be verified. Lastly, the results of the analyses and the conclusions reached were presented to the clinical team for validation. The clinicians corroborated our observation about the limited number of cases corresponding to Scenario B. This scenario would in fact appear to be marginal in the context of a therapeutic trajectory averaging one year in duration for workers. An increased number of services actually appears to fuel the workers' perception of severity (Baril et al., 2008).

7. Impacts

Though exploratory in nature, this study has implications for both research and clinical practice. Regarding its clinical impact, it highlights the importance of understanding the representations held by workers with a disability of musculoskeletal origin. In addition to this need for understanding, it is important that the objective be agreed to, or at the very least, that the strategy put forward make sense in the worker's mind. Joint decision making has already been recognized as a good clinical practice in various health-related fields. It would be worthwhile in the future to adapt and implement this type of joint decision-making process so that the strategies adopted can effectively target the goal of preventing long-term disability. Subsequent studies could also triangulate the data obtained within the dyad by adding in an observation component. It would then be possible to explore the process and mechanisms involved in the clinician/worker dialogue and decision making.

The task of studying the clinician/worker dyad on a larger scale would be made easier through the development of valid measurement instruments. Currently, such measurement instruments already exist in front-line care, but they do not allow for the clinical judgment to be differentiated from the clinician's understanding of his patient's representations.

8. Conclusion

The results of this project clearly made it possible to identify various scenarios for the differences that can occur between a clinician and a worker involved in occupational rehabilitation. The benefit of this type of clinical research is that it moves closer to the therapeutic reality of disability prevention, and thus takes into account factors that may affect the clinician/patient relationship, such as the administrative constraints inherent to this field. In line with the results obtained in prior studies conducted in physiotherapy and other health fields, this study highlights the importance of understanding representations and of setting goals and strategies that are acceptable to the worker.

9. Project spinoffs

- Conference presentations

Coutu, M.F., Baril, R., Durand, M.J., Rouleau, A., Côté, D., Cadieux, G. (accepted). Methodological Challenges Associated with Dyadic Measures in Qualitative Studies. CARWH 2008.

- Knowledge transfer activities, upon invitation

Coutu, M.F. (June 18 and 19, 2008). Les déterminants de l'incapacité au travail. 2e Congrès francophone sur les troubles musculo-squelettiques : de la recherche à l'action. Organized by the IRSST and CSST, Montreal.

Coutu, M.F. (May 2008). Que pensent nos patients de leur douleur et de leur incapacité ? In the context of a 2008 symposium on pain and disability at the continuing education centre of the Faculty of Medicine and Health Sciences at the Université de Sherbrooke, Longueuil and Rimouski campuses.

Coutu, M. F. (April 2008). La douleur persistante. Training day for psychologists. Organized by the Association des Troubles Anxieux du Québec.

- Other grants requested on the basis of the results of this project

Coutu, M.F., Légaré, F., Corbière, M., Durand, M.J., Loisel, P. (re-submission) Implementation and evaluation of an adapted shared decision-making process in work disability prevention, CIHR, \$415,000

- Scientific article written in the context of the current grant

Coutu, M.F., Baril, R., Durand, M.J., Rouleau, A., Côté, D., Cadieux, G. (under development). Patients' and clinicians' understanding: Does it matter after all?

References

- Arnetz, J., Almin, I., Bergstrom, K., Franzen, Y., & H., N. (2004). Active patient involvement in the establishment of physical therapy goals: Effects on treatment outcome and quality of care. *Advances in Physiotherapy*, 6, 50-69.
- Bandura, A. (1977). *A Social Learning Theory*. Englewood, NJ: Prentice Hall.
- Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: W. H. Freeman.
- Baril, R., Durand, M. J., Coutu, M. F., Côté, D., Cadieux, G., Rouleau, A., et al. (2008). L'influence des représentations de la maladie, de la douleur et de la guérison sur le processus de réadaptation au travail des travailleurs présentant des troubles musculo-squelettiques. Longueuil, Québec, Canada: Institut de recherche Robert Sauvé en santé sécurité du travail.
- Baril, R., Martin, J. C., Lapointe, C., & Massicotte, P. (1994). Étude exploratoire des processus de réinsertion sociale et professionnelle des travailleurs en réadaptation. Montreal, Quebec (Canada): Institut de recherche Robert-Sauvé en santé et en sécurité du travail.
- Barns, M. P., & Ward, A. B. (2000). *Textbook of rehabilitation medicine*. Oxford: Oxford University Press.
- Cedraschi, C., Robert, J., Perrin, E., Fischer, W., Goerg, D., & Vischer, T. L. (1996). The role of congruence between patient and therapist in chronic low back pain patients. *Journal of Manipulative and Physiological Therapeutics*, 19(4), 244-249.
- Charles, C., Whelan, T., & Gafni, A. (1999). What do we mean by partnership in making decisions about treatment? *British Medical Journal*, 319(7212), 780-782.
- Coutu, M. F., Baril, R., Durand, M. J., Côté, D., & Rouleau, A. (2007). Representations: An important key to understanding workers' coping behaviours during rehabilitation and the return-to-work process. *Journal of Occupational Rehabilitation*, 17(3), 522-544.
- Croyle, R. T., & Jemmott, I. J. B. (1991). Psychological reaction to risk factor testing. In J. A. Skelton & R. T. Croyle (Eds.), *Mental Representation in Health and Illness* (pp. 85-107). New York: Springer-Verlag.
- CSST. (2004). *Statistiques sur les affections vertébrales, 2000-2003*. Quebec (Canada): CSST.
- Daykin, A. R. P. M., & Richardson, B. P. M. (2004). Physiotherapists' Pain Beliefs and Their Influence on the Management of Patients With Chronic Low Back Pain. *Spine* April 1, 29(7), 783-795.
- Durand, M. J., Loisel, P., Charpentier, N., Labelle, J., & Hong, Q. N. (2004). Le programme de Retour Thérapeutique au Travail (RTT). Longueuil: Centre de recherche clinique en réadaptation au travail PRÉVICAP de l'Hôpital Charles LeMoine.
- Durand, M. J., Vachon, B., Loisel, P., & Berthelette, D. (2003). Constructing the program impact theory for an evidence-based work rehabilitation program for workers with low back pain. *Work: a journal of prevention, assessment and rehabilitation*, 21(3), 233-242.

- Ford, S., Schofield, T., & Hope, T. (2003). What are the ingredients for a successful evidence-based patient choice consultation?: A qualitative study. *Social Science & Medicine*, 56, 589-602.
- Hébert, F., Duguay, P., Massicotte, P., & Levy, M. (1996). Révision des catégories professionnelles utilisées dans les études de l'IRSST portant sur les indicateurs quinquennaux de lésions professionnelles. Montreal, Quebec, Canada: Institut Robert-Sauvé de recherché en santé et en sécurité au travail (IRSST).
- [page 36]
- Henderson, M., Glozier, N., & Elliott, K. H. (2005). Long term sickness absence. *British Medical Journal*, 330, 802-803.
- Holmes-Rovner, M., & Rovner, D. (2000). Measuring improved patient choice. *Journal of Evaluation in Clinical Practice*, 6(3), 263-272.
- Jodelet, D. (1989). *Les représentations sociales dans le champ des sciences humaines*. Paris, France: Presses universitaires de France.
- Krause, N., Frank, J., Dasinger, L. K., Sullivan, T. J., & Sinclair, S. J. (2001). Determinants of duration of disability and return-to-work after work-related injury and illness: challenges for future research. *American Journal of Industrial Medicine*, 40, 464-484.
- Landry, R. (1997). L'analyse de contenu. In B. Gauthier (Ed.), *Recherche sociale de la problématique à la collecte de données* (pp. 329-356). Quebec (Quebec) Canada: Presses de l'Université du Québec.
- Leventhal, H., Brissette, I., & Leventhal, E. A. (2003). The common-sense model of self-regulation of health and illness. In L. Cameron & H. Leventhal (Eds.), *The self-regulation of health and illness behaviour* (pp. 42-65). London, UK: Routledge.
- Leventhal, H., & Diefenbach, M. (1991). The active side of illness cognition. In J. A. Skelton & R. T. Croyle (Eds.), *Mental Representation in Health and Illness* (pp. 247-272). New York: Springer-Verlag.
- Leventhal, H., Diefenbach, M., & Leventhal, E. A. (1992). Illness cognition: Using common sense to understand treatment adherence and affect cognition interactions. *Therapy and Research*, 16, 143-163.
- Leventhal, H., Zimmerman, R., & Gutmann, M. (1984). Compliance: A self-regulation perspective. In W. D. Gentry (Ed.), *Handbook of Behavioral Medicine* (pp. 369-436). New York: Guilford Press.
- Limoges, J. (1987). Pourquoi travailler? In J. Limoges, R. Lemaire & F. Dodier (Eds.), *Trouver son travail*. (pp. 13-27). Montreal: CIM Fides.
- Loisel, P., Abenhaim, L., Durand, P., Esdaile, J. M., Suissa, S., Gosselin, L., et al. (1997). A population-based, randomized clinical trial on back pain management. *Spine*, 22(24), 2911 - 2918.
- Makoul, G., & Clayman, M. L. (2006). An integrative model of shared decision making in medical encounters. *Patient Education & Counseling*, 60(3), 301-312.

- Rivero-Arias, O., Campbell, H., Gray, A., Fairbank, J., Frost, H., & Wilson-MacDonald, J. (2005). Surgical stabilisation of the spine compared with a programme of intensive rehabilitation for the management of patients with chronic low back pain: cost utility analysis based on a randomised controlled trial. *British Medical Journal*, 330, 1239-1245.
- Sandelowski, M. (1995). Sample size in qualitative research. *Research in Nursing & Health*, 18(2), 179-183.
- Sewitch MJ, Abrahamowicz M, Bitton A, Daly D, Wild GE, Cohen A, et al. (2002). Psychosocial correlates of patient-physician discordance in inflammatory bowel disease. *The American Journal of Gastroenterology*, 97, 2174-2183.
- Turk, D. C., Holzman, A. D., & Kerns, R. D. (1986). Chronic pain. In K. A. Holroyd & T. L. Creer (Eds.), *Self-Management of Chronic Disease* (pp. 441-456). London: Academic Press.
- Vlaeyen, J. W., de Jong, J., Geilen, M., Heuts, P. H., & van Breukelen, G. (2002). The treatment of fear of movement/(re)injury in chronic low back pain: further evidence on the effectiveness of exposure in vivo. *Clinical Journal of Pain*, 18(4), 251-261.
- Vlaeyen, J. W., Kole-Snijders, A. M., Boeren, R. G., & van Eek, H. (1995). Fear of movement/(re)injury in chronic low back pain and its relation to behavioral performance. *Pain*, 62(3), 363-372.
- Watson Wyatt W. (2005). *Staying at work: Making the connection to a healthy organization*. Research report. Toronto, Canada: Watson Wyatt Worldwide inc.
- Yin, R. K. (1994). *Case study research: Design and methods* (Vol. 5). Thousand Oaks, CA: Sage.