

Determinants of Return-to-Work among Employees Absent Due to Mental Health Problems

Les déterminants du retour au travail à la suite d'une absence en raison d'un problème de santé mentale chez les travailleurs

Los factores determinantes para los trabajadores del retorno al trabajo después de una ausencia debida a un problema de salud mental

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Article abstract

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Determinants of Return-to-Work among Employees Absent Due to Mental Health Problems

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The contribution of work in the occurrence of mental health problems prompts us to question the conditions which favour a successful return to work. The goals of this study are to describe the profile of workers who have been absent due to a mental health problem and to compare those who returned to those who did not, and those for whom there was resolution or non resolution of their health problem. This study among public sector employees was cross-sectional. Data was collected using mailed questionnaires and analyses were performed for 1850 respondents. The results show a significant difference between those who were back at work and those who were not, based on the cause they reported for their absence from work. Improved working conditions accompanying return to work may be a major determinant of health recovery and successful return to work, and ensure job retention.

Over the last decades, workplaces have undergone a great deal of upheaval which has affected individuals' capacity to work and retain their

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jobs, and also their mental health. According to Vinet (2004), the spectacular rise in absences due to work-related mental health problems and the ensuing proportional rise in group insurance premiums attest to the extent and depth of this phenomenon. Work-related mental health problems are currently one of the leading causes of absence from work, and this phenomenon has grown markedly in recent years (Banham, 1992; Conti and Burton, 1994; Gabriel and Liimatainen, 2000; Karttunen, 1995; Vézina, 1996; Vézina and Bourbonnais, 2001; Nystuen, Hagen and Herrin, 2001). These health problems take diverse forms and diagnoses: adjustment disorders, situational depression, burnout, dependency problems, phobia, etc. (Gabriel and Liimatainen, 2000). According to Nieuwenhuijsen *et al.* (2003), the majority of workers who are absent due to a mental health problem suffer from transitory mental disorders that can be grouped into three categories: adjustment disorders (including burnout), mood disorders (including major depression), and anxiety disorders (Shiels, Gabbay and Ford, 2004; van der Klink *et al.*, 2003).

Based on a report on mental health in the workplace by the International Labour Office (ILO) involving five industrialized countries—the United States, Great Britain, Germany, Finland and Poland—20% of the adult population is affected by a mental health problem (Gabriel and Liimatainen, 2000). Data from the European survey on working conditions, conducted in 2000, indicate that, after back pain, work-related stress is the second most common health problem across Europe (European Foundation for the Improvement of Living and Working Conditions, 2005). In industrialized countries, including Canada and Quebec, successive surveys have indicated that between one in five and one in four people in the general population show a high level of psychological distress (Institut de la statistique du Québec, 2000). An analysis of data from health surveys conducted between 1987 and 1998 on the development of work disability due to mental health problems among Quebecers clearly shows the increasing importance of this phenomenon (Vézina and Bourbonnais, 2001). Indeed, the proportion of workers who were absent as a result of a mental health problem almost doubled during this period, from 7.2% to 13.2%. In addition to being absent more often, workers were absent for longer periods of time. In fact, the analysis shows that the average number of disability days per person due to a health problem almost doubled between 1992 and 1998, from 3.49% to 7.83%.

A recent Health Canada report concludes that mental ill health in workplaces cost Canadian companies nearly 14% of their annual net profit, representing approximately \$16 billion annually (Sroujian, 2003). For many wage loss insurance companies, mental health-related claims represent the most rapidly increasing category of disability costs. At Standard Life, from 1991 to 2003, the incidence of long-term disabilities related to mental

health problems increased by 120% (Dubé and Parent, 2004). In 2005, as in each of the previous 14 years, the main causes of disability indicated in new applications for benefits involved mental health problems, in particular depression and anxiety, which accounted for 47% of these applications (Conseil de gestion du régime d'assurance invalidité, 2005). The same is true in Quebec for the Commission de la santé et de la sécurité du travail (occupational health and safety commission, CSST) which saw its total compensation payments for employment injuries related to stress, burnout or other psychological factors, rise from \$5.8 million in 1995 to \$14.3 million in 2004 (CSST, 2006).

Many workers are likely to be faced with a mental health problem that is serious enough to cause absence from work. Mental health problems are not trivial illnesses. They can have particularly incapacitating effects resulting in long periods of disability, are persistent, and involve a high risk of relapse (Conti and Burton, 1994; Druss, Schlesinger and Allen, 2001). Studies have shown that the duration of a work disability as a result of depression appears to be two and a half times longer than that caused by other illnesses (Gabriel and Liimatainen, 2000). Moreover, a lack of support measures during the occupational reintegration process can lead to the construction of permanent work disability and thus to marginalization and social exclusion. Despite the extent of work absences and the concern raised by this phenomenon, studies on the occupational reintegration process of workers who have been absent due to a mental health problem remain fragmented.

Most of the studies reviewed in the field of mental health rehabilitation focus on people with serious mental illness such as schizophrenia, whose life trajectory has been mainly marked by difficulties with occupational integration rather than with occupational reintegration. In the field of occupational health, studies on rehabilitation essentially focus on workers who have been victims of accidents or occupational diseases. Although these mental health and occupational health studies do not apply specifically to the population examined here, they nevertheless highlight some findings on the interventions to be favoured in this field and, as such, shed an interesting light on this study. In fact, the more recent conceptual frameworks developed in the field of rehabilitation state the need to take environmental factors into account in the analysis of the rehabilitation process (Badley, 1995; Fougereyrollas, 1995; Franche *et al.*, 2005; Baril *et al.*, 2003; Loisel *et al.*, 2005; Durand *et al.*, 2003). According to Loisel *et al.* (2001), the effectiveness of an occupational reintegration program depends, in particular, on a well-documented analysis of return-to-work opportunities and obstacles which exist at various levels in the workplace, that is, from the employee's individual work situation to the overall organization of the workplace.

Some studies have specifically examined the occupational reintegration of workers who held a job and were absent due to a mental health problem, but few of these have focused on the work environment (Briand *et al.*, 2007). Research studies on this subject are mainly oriented towards cognitive-behavioural interventions centred on the individual, which involve problem solving and stress management, and hardly consider the work environment and concerted action among partners (Nystuen and Hagen, 2003; van der Klink *et al.*, 2003). However, the need to take work-related variables into account in the analysis of the occupational reintegration process is all the more crucial since an increasing number of studies have demonstrated that there is a link between psychosocial constraints deriving from work and the development of mental health problems as measured by psychological distress or absenteeism. In fact, several epidemiological studies, some of which are based on longitudinal research designs, have documented the effect of work constraints on the prevalence and incidence of mental health problems (Karasek and Theorell, 1990; Niedhammer *et al.*, 1998; van der Doef and Maes, 1999; Stansfeld *et al.*, 1999; Brisson, Larocque and Bourbonnais, 2001; Siegrist and Marmot, 2004; Rugulies *et al.*, 2006; Bourbonnais *et al.*, 2006a).

In recent years, workplaces have undergone a great deal of upheaval which has had an impact on work organization, in particular through work intensification and increasing job insecurity, and an effect on the mental health and capacity to work of individuals. Based on this perspective, the role played by work in the occurrence of mental health problems prompts us to question its impact on the conditions which favour a successful return to work. In brief, it is reasonable to think that if working conditions can lead to mental health problems and withdrawal from work, then the improvement of these very same conditions could be a determining factor in the solution of mental health problems, and consequently, in job retention following a return to work.

Goals and Hypotheses

The goals of this study are twofold: to describe the profile of workers who have been absent due to a mental health problem and to compare these based on the outcome of their occupational reintegration, i.e. return or non return to work and solution or non solution of their health problem. Our first hypothesis is that fewer workers who consider that work is the main cause of their health problem will return to work than workers who consider that their personal life is the main cause of their health problem. Our second hypothesis is that workers who experienced positive changes in their job situation when returning to work are more likely to have solved

their mental health problem than those who did not experience positive changes when returning to work.

METHODOLOGY

Participants

This study was conducted with employees in the public and parapublic sectors of health and social services, education and the public service in Quebec, who were absent from work due to a mental health problem, certified by a medical diagnosis. The subjects were selected from a databank on sickness absence collected by a department which administers applications for wage loss insurance benefits due to illness. The diagnoses recorded in the subjects' medical files mainly involved mood disorders (including depression), adjustment disorders and anxiety disorders. All selected participants came from the Québec City and Montréal areas and thus represent the great majority of insured persons in the province of Quebec. This population has the advantages of being relatively homogenous in terms of wage loss insurance conditions and of including workers in different job categories. All subjects who were absent due to an episode of mental illness for a period of more than three consecutive weeks within a 12-month period were eligible to participate in the study (N = 3828).

The Questionnaire

The questionnaire, which was made up of mostly closed-ended questions, was meant to be short and simple in order to favour a better response rate and to take into account the concentration problems sometimes experienced by individuals with a mental health condition (Dillman, 1978; Gauthier, 1997).

In addition to socio-demographic variables (age, gender, family situation and dependent children aged under 18), the questionnaire was developed so as to take into account working conditions such as sector of activity, job type and job status. Some questions dealt with the duration of absence and the number of previous episodes. Questions relating to the cause of the mental health problem and the organizational factors involved in the occupational reintegration process were drawn up based on Vézina *et al.*'s studies (1992) produced within the Comité sur la santé mentale au travail du Québec (Quebec committee on work-related mental health). These projects led to the identification of a set of occupational risk factors behind work-related mental health problems. Lastly, the questions concerning return-to-work, the conditions surrounding occupational reintegration and the solution of health problems were assessed through closed- and open-ended questions.

The questionnaires were mailed to all eligible subjects by the department that administers applications for wage loss insurance benefits in order to maintain full confidentiality for those who might participate in the research. A stamped return envelope, pre-addressed to the researchers, was included with the questionnaire. A reminder was sent out to secure a better response rate.

Data Analyses

First, the data were processed such that the general profile of respondents was presented. Women and men were compared based on their socio-occupational characteristics. For these women-men comparisons, a chi-square test was conducted for variables with categories and a t test was conducted for continuous variables. Second, workers who had returned to work were compared with those who had not returned to work, based on: (1) their socio-occupational characteristics: gender, age, family situation, job type and job status; (2) the cause of absence from work: personal, work-related or both reasons, and the associated occupational factors: work overload, non recognition, conflicts with a supervisor, conflicts with one or more coworkers, negative evaluation, lack of autonomy, concern about job loss; and (3) health status: duration of absence, previous episodes and solution of health problems. Prevalence ratios and their 95% confidence intervals were used to measure the association between each of these factors and return-to-work (Rothman and Greenland, 1998). Third, all workers who returned to work were examined based on the solution of their health problem (return with solved vs. unsolved health problem), the preceding variables, and the working conditions surrounding the occupational reintegration (gradual return and changes in the job situation). Prevalence ratios and their 95% confidence intervals were used to measure the association between each of these factors and the solution of the problem having led to withdrawal from work (*ibid.*). Lastly, a multivariate analysis was conducted to measure the association of each of the factors associated with the return to work or the solution of the problem by controlling for the other factors. A binomial regression was conducted by including the socio-demographic and occupational characteristics and the conditions surrounding reintegration which were associated with the return to work or the solution of the problem during the univariate analyses. All analyses were conducted using SPSS and SAS software. All analyses were conducted for women and men separately, but since the factors associated with the return to work and the solution of the problem were more or less the same for both, the results are presented here for both genders combined.

RESULTS

General Profile of Respondents

At the outset, 3828 questionnaires were mailed out, of which 260 did not reach the addressees and were returned and 34 were withdrawn because too many answers were missing. A total of 1850 questionnaires were retained, representing 52% of targeted individuals. An analysis of characteristics based on age, gender and sector of activity indicates that the distribution of respondents was not different from that of the whole population ($N = 3828$).

Women represented 74% ($N = 1373$) of respondents and men 26% ($N = 477$) (Table 1). The average age of participants was 45 ($SD = 8.3$), ranging from 23 to 77 years. As regards family situation, 65% of respondents lived with a spouse (63% for women and 72% for men) and 49% had children aged under 18 living at home (50% for women and 45% for men).

The types of jobs held included managers (5%; 4% of women and 9% of men), professionals (49%, 47% of women and 52% of men), technicians (13%, 11% of women and 21% of men) and support staff (workers, office clerks, secretaries, etc.) (33%, 39% of women and 18% of men). The great majority of respondents held a permanent position (92%; 90% of women and 96% of men).

In total, only 9% of respondents (10% of women and 6% of men) referred mainly to their personal life to explain their health problem and absence from work; 32% attributed this situation to their work (27% of women and 43% of men), and almost two-thirds of respondents (63% of women and 50% of men) attributed it to both their personal life and their work. Among the work constraints identified by the subjects, work overload was the most common, 62% for both women and men. Non recognition was also reported by almost half of the subjects (48% for all subjects, 46% for women and 53% for men). These were followed by conflicts with supervisors (31%), conflicts with coworkers (20%), negative evaluation of their work (19%), lack of work autonomy (17%) and job insecurity (14%).

The profile of absence shows that the majority of participants, or 66% of respondents, were in their first episode of absence due to a mental health problem, 20% had experienced a previous episode, 14% two or more episodes. The average duration of absence for these participants was 39 weeks (36 for women and 48 for men) and among them, 23% were absent for 25 to 52 weeks (24% for women and 22% for men) and 22% for over a year (20% for women and 27% for men).

TABLE 1
Comparative Analysis of Men and Women

<i>Variables</i>	<i>Women</i> 74.2% (N = 1373) ^a	<i>Men</i> 25.8% (N = 477)	<i>Total</i> (N = 1850)	<i>Chi-square</i>
Age				
34 and under	12.6% (172)	5.7% (27)	10.9% (199)	P = 0.000
35–44	38.4% (522)	25.2% (119)	35.0% (641)	
45–54	38.9% (529)	44.2% (209)	40.2% (738)	
55 or older	10.1% (138)	24.9% (118)	14.0% (256)	
Mean (standard deviation)	44.26 (8.13)	48.47 (8.09)	45.36 (8.33)	
Family situation				
With spouse	62.7% (850)	71.6% (338)	65.0% (1188)	P = 0.000
No spouse	37.3% (505)	28.4% (134)	35.0% (639)	
With child(ren)	50.3% (682)	44.8% (211)	48.9% (893)	P = 0.041
No children	49.7% (675)	55.2% (260)	51.1% (935)	
Job type (gr)				
Managers	3.5% (47)	9.3% (44)	5.0% (91)	P = 0.000
Professionals	47.3% (643)	51.7% (244)	48.5% (887)	
Technicians	10.6% (144)	21.2% (100)	13.3% (244)	
Support staff	38.6% (524)	17.8% (84)	33.2% (608)	
Job status				
Permanent	90.1% (1214)	96.2% (450)	91.7% (1664)	P = 0.000
Temporary	9.9% (133)	3.8% (18)	8.3% (151)	
Cause of absence				
Personal	9.7% (131)	6.4% (30)	8.9% (161)	P = 0.000
Work-related	27.4% (369)	43.2% (203)	31.5% (572)	
Personal and work-related	62.9% (846)	50.4% (237)	59.6% (1083)	
Work-related factors				
Work overload	62.2% (846)	61.3% (290)	61.9% (1136)	P = 0.743
Non recognition	46.3% (630)	53.3% (252)	48.1% (882)	P = 0.009
Conflicts with supervisors	28.0% (381)	37.8% (179)	30.5% (560)	P = 0.000
Conflicts with coworkers	19.5% (265)	21.8% (103)	20.1% (368)	P = 0.281
Negative evaluation	16.0% (218)	28.3% (134)	19.2% (352)	P = 0.000
Lack of autonomy	15.0% (204)	24.3% (115)	17.4% (319)	P = 0.000
Job insecurity	13.8% (188)	14.8% (70)	14.1% (258)	P = 0.595
Number of episodes				
1 episode	68.0% (907)	59.3% (277)	65.8% (1184)	P = 0.000
2 episodes	19.4% (259)	20.8% (97)	19.8% (356)	
3 or more episodes	12.5% (167)	19.9% (93)	14.4% (260)	
Duration of absence				
1–12 weeks	34.5% (444)	29.9% (133)	33.3% (577)	P = 0.015
13–24 weeks	21.5% (277)	21.3% (95)	21.5% (372)	
25–52 weeks	23.9% (308)	21.6% (96)	23.3% (404)	
53 or more weeks	20.1% (259)	27.2% (121)	21.9% (380)	
Mean (standard deviation)	36.08 (40.69)	47.60 (58.41)	39.04 (46.15)	
Return to work				
Return	71.5% (972)	61.4% (290)	68.9% (1262)	P = 0.000
No return	28.5% (388)	38.6% (182)	31.1% (570)	
Solution of problem				
Solved	47.5% (628)	42.5% (197)	46.2% (825)	P = 0.064
Not solved	52.5% (693)	57.5% (266)	53.8% (959)	

^aIt should be noted that the number of subjects (N) may vary according to the different variables due to missing values.

As regards occupational reintegration, 69% (N = 1262) of respondents had returned to work (72% of women and 61% of men). It should be noted that of those who had not returned to work, i.e. 31% (N = 570) of respondents, 16% had left their job permanently to go into retirement while the others were still on sick leave, extended disability leave or sabbatical or had been unemployed since their last absence from work. It is worth mentioning that at the time of questionnaire administration, only 46% of respondents declared their mental health problem solved (48% of women and 43% of men).

Analysis of Occupational Reintegration Profile

Table 2 presents the prevalence ratios based on the occupational reintegration profile (return to work vs. non return to work) in order to determine which characteristics were associated with return to work.

Significantly more women than men had returned to work (PR = 0.74). Those who had not returned to work were significantly older than those who had returned to work (PR = 2.60 for those aged 55 or older and 1.50 for those aged 45–54). Respondents who had children (PR = 0.71) and those who lived with a spouse (PR = 0.87, N.S.) were more likely to have returned to work. Fewer managers and professionals had returned to work than support staff. No significant difference was observed for return-to-work based on job status, whether permanent or contractual.

A significant difference was observed between those who were back at work and those who were not, based on the cause of their absence from work. Those who said that their absence was mainly due to their work (PR = 1.75) or to both their work or personal factors (PR = 1.48) were less likely to have returned to work than those whose absence was due to their personal life, which confirms our first hypothesis. An analysis of work-related factors shows that significantly more participants who had not returned to work identified, among the working conditions which prevailed when they stopped working, work overload (PR = 1.25), non recognition of efforts (PR = 1.07), conflicts with supervisors (PR = 1.04), and negative work evaluation (PR = 1.05).

Compared to those who had returned to work, a significantly greater number of those who had not returned to work had had a previous episode (PR = 1.65 for those who had had 3 or more episodes and 1.40 for those who had had 2 episodes). Duration of absence was also associated with non return to work (PR = 1.92 for those absent for 13 to 24 weeks, 2.49 for those absent for 25 to 52 weeks and 5.77 for those absent for 53 or more weeks). As could be expected, those whose health problem had been solved (were more likely to have returned to work) (PR = 0.39).

TABLE 2

**Prevalence Ratios (PR) and 95% Confidence Intervals (95% CI) between
Non-Return-to-Work and the Different Variables Examined**

<i>Variables</i>	<i>Return</i> 68.9% (N = 1274) ^a	<i>Non-return</i> 31.1% (N = 574)	<i>PR</i>	<i>95% CI</i>
Gender				
Men	61.4% (290)	38.6% (182)	1.00	–
Women	71.5% (972)	28.5% (388)	0.74	0.64 – 0.85
Age				
34 and under	77.9% (155)	22.1% (44)	1.00	–
35–44	79.9% (512)	20.1% (129)	0.91	0.67 – 1.23
45–54	66.8% (492)	33.2% (245)	1.50	1.14 – 1.99
55 or older	42.4% (115)	57.6% (156)	2.60	1.97 – 3.45
Family situation				
With spouse	70.6% (847)	29.4% (353)	0.87	0.76 – 1.00
No spouse	66.2% (425)	33.8% (217)	1.00	–
With child(ren)	74.4% (669)	25.6% (230)	0.71	0.62 – 0.82
No children	64.0% (604)	36.0% (340)	1.00	–
Job type (gr)				
Managers	58.1% (54)	41.9% (39)	1.63	1.24 – 2.14
Professionals	65.8% (587)	34.2% (305)	1.33	1.13 – 1.56
Technicians	71.4% (177)	28.6% (71)	1.11	0.88 – 1.41
Support staff	74.2% (455)	25.8% (158)	1.00	–
Job status				
Permanent	69.0% (1159)	31.0% (521)	1.00	–
Temporary	68.2% (103)	31.8% (48)	1.03	0.80 – 1.31
Cause of absence				
Personal	79.6% (129)	20.4% (33)	1.00	–
Work-related	64.3% (371)	35.7% (206)	1.75	1.27 – 2.42
Personal and work-related	69.8% (761)	30.2% (329)	1.48	1.08 – 2.04
Work-related factors				
Work overload	66.4% (761)	33.6% (385)	1.25	1.08 – 1.44
Non recognition	64.5% (573)	35.5% (315)	1.07	1.03 – 1.11
Conflicts with supervisors	64.5% (364)	35.5% (200)	1.04	1.01 – 1.07
Conflicts with coworkers	68.1% (252)	31.9% (118)	1.01	0.98 – 1.03
Negative evaluation	58.6% (208)	41.4% (147)	1.05	1.03 – 1.08
Lack of autonomy	68.2% (219)	31.8% (102)	1.01	0.95 – 1.07
Job insecurity	69.1% (179)	30.9% (80)	1.00	0.90 – 1.10
Number of episodes				
1 episode	73.8% (880)	26.2% (312)	1.00	–
2 episodes	63.3% (226)	36.7% (131)	1.40	1.19 – 1.66
3 or more episodes	56.8% (147)	43.2% (112)	1.65	1.40 – 1.96
Duration of absence				
1–12 weeks	87.3% (509)	12.7% (74)	1.00	–
13–24 weeks	75.7% (283)	24.3% (91)	1.92	1.45 – 2.53
25–52 weeks	68.4% (277)	31.6% (128)	2.49	1.93 – 3.22
53 or more weeks	26.8% (103)	73.2% (281)	5.77	4.62 – 7.19
Solution of problems				
Solved	83.1% (688)	16.9% (140)	0.39	0.33 – 0.46
Not solved	56.7% (545)	43.3% (417)	1.00	–

^a It should be noted that the number of subjects (N) may vary according to the different variables because of missing values.

Table 3 shows the factors which are significantly associated with non return to work when they are adjusted for other factors in the model and thus independent of these other factors. Fewer older subjects had returned to work after an episode of mental health problem, and managers and professionals were less likely to have returned to work than support staff. Lastly, non recognition at work and a negative evaluation were the constraints independently associated with non return to work.

TABLE 3

Adjusted Prevalence Ratios (PR)^a and 95% Confidence Intervals (95% CI) between Non Return-to-Work and the Different Variables Examined

<i>Variables</i>	<i>Adjusted PR</i>	<i>95% CI</i>
Gender		
Men	1.00	–
Women	0.93	0.81 – 1.07
Age		
34 and under	1.00	–
35–44	0.90	0.67 – 1.20
45–54	1.34	1.02 – 1.75
55 or older	2.33	1.78 – 3.06
Job type (gr)		
Managers	1.34	1.03 – 1.73
Professionals	1.20	1.03 – 1.40
Technicians	1.14	0.91 – 1.42
Support staff	1.00	–
Work-related factors		
Work overload	1.11	0.97 – 1.28
Non recognition	1.05	1.01 – 1.08
Conflicts with supervisors	1.00	0.98 – 1.03
Conflicts with coworkers	1.00	0.97 – 1.02
Negative evaluation	1.03	1.01 – 1.06
Lack of autonomy	0.97	0.92 – 1.03
Job insecurity	1.03	0.95 – 1.13

^a Each of the variables of the multivariate model has been adjusted for all the others in the Table.

Analysis of Solution of Health Problems among Those Who Returned to Work

Table 4 presents the main results of the analysis on solution of health problems among those who returned to work. Only 55.8% (688/1233) of those who had returned to work considered that they had solved their mental health problem. First, the analysis of variables related to socio-demographic

TABLE 4

Prevalence Ratios (PR) and 95% Confidence Intervals (95% CI) between Non Solution of Problem and the Different Variables Examined among Those Who Had Returned to Work

<i>Variables</i>	<i>Solved</i> 55.8% (N = 688) ^a	<i>Not solved</i> 44.2% (N = 545)	<i>PR</i>	<i>95% CI</i>
Gender				
Men	51.4% (147)	48.6% (139)	1.00	–
Women	57.2% (538)	42.8% (402)	0.88	0.76 – 1.01
Age				
34 and under	68.7% (103)	31.3% (47)	1.00	–
35–44	54.9% (271)	45.1% (223)	1.44	1.12 – 1.86
45–54	52.7% (254)	47.3% (228)	1.51	1.17 – 1.95
55 or older	56.1% (60)	43.9% (47)	1.40	1.02 – 1.93
Family situation				
With spouse	54.8% (452)	45.2% (373)	1.07	0.94 – 1.23
No spouse	57.9% (235)	42.1% (171)	1.00	–
With child(ren)	55.9% (362)	44.1% (286)	1.00	0.88 – 1.13
No children	55.7% (325)	44.3% (259)	1.00	–
Job type (gr)				
Managers	65.4% (34)	34.6% (18)	0.72	0.49 – 1.05
Professionals	57.9% (333)	42.1% (242)	0.87	0.76 – 1.00
Technicians	56.1% (96)	43.9% (75)	0.91	0.75 – 1.10
Support staff	51.6% (224)	48.4% (210)	1.00	–
Job status				
Permanent	55.6% (624)	44.4% (499)	1.00	–
Temporary	58.6% (58)	41.4% (41)	0.93	0.73 – 1.19
Cause of absence				
Personal	72.8% (91)	27.2% (34)	1.00	–
Work-related	55.8% (201)	44.2% (159)	1.62	1.19 – 2.21
Personal and work-related	52.9% (390)	47.1% (347)	1.73	1.29 – 2.33
Number of episodes				
1 episode	58.5% (500)	41.5% (354)	1.00	–
2 episodes	57.3% (126)	42.7% (94)	1.03	0.87 – 1.22
3 or more episodes	39.4% (56)	60.6% (86)	1.46	1.25 – 1.71
Duration of absence				
1–12 weeks	57.2% (282)	42.8% (211)	1.00	–
13–24 weeks	57.5% (157)	42.5% (116)	0.99	0.84 – 1.18
25–52 weeks	53.1% (144)	46.9% (127)	1.09	0.93 – 1.29
53 or more weeks	44.9% (44)	55.1% (54)	1.29	1.05 – 1.58
Return conditions				
Gradual return	53.9% (353)	46.1% (302)	1.08	0.95 – 1.23
With changes	64.0% (398)	36.0% (224)	0.67	0.59 – 0.77

^a It should be noted that the number of subjects (N) may vary according to the different variables because of missing values.

and occupational characteristics shows that those who considered that they had not solved their health problem were on average older ($PR = 1.40$ to 1.51) than those who considered that their health problem had been solved. No significant difference was observed based on gender, living with a spouse, having children aged under 18 living at home, holding a permanent or temporary job, or job type.

The analysis of results based on the main cause of absence from work shows that those who were absent due to work-related factors, compared with those who cited a reason related to their personal life, were more likely to have resumed their work activity without their problem having been solved ($PR = 1.62$). Similarly, those who were absent for reasons related both to their personal life and to work were more likely to consider that their problem had not been solved ($PR = 1.73$). Furthermore, those who had had 3 or more episodes of absence ($PR = 1.46$) and those who had been absent longer ($PR = 1.29$) were also more likely to report that their health problem had not been solved.

Lastly, our analysis focused on the conditions surrounding occupational reintegration and the types of changes having been made in the job situation. The analysis of the solution of health problems based on the conditions surrounding occupational reintegration shows that there was no significant difference between those whose health problem had been solved and those whose health problem had not been solved based on whether or not there was a gradual return to work. However, significantly fewer participants who reported having experienced changes which improved their job situation upon their return to work, considered that their health problem had not been solved ($PR = 0.67$), which confirms our second hypothesis.

Table 5 shows the factors which are significantly associated with the solution of the health problem when they are adjusted for other factors and thus independent of these other factors. Although the association is not statistically significant, women seemed less likely than men to have returned to work with an unsolved health problem ($PR = 0.88$). Subjects aged 34 and under were also less likely to have returned to work with an unsolved problem ($PR = 1.42$ for those aged 35 to 44 and 1.52 for those aged 45 to 54). Managers and professionals were also less likely than support staff to have returned to work with an unsolved health problem ($PR = 0.62$ and 0.86 respectively). Lastly, subjects who benefited from a change which improved their working conditions were less likely to have returned to work with an unsolved health problem ($PR = 0.68$).

DISCUSSION

This research aimed to describe and compare the occupational reintegration profile of workers who had been absent due to a mental health

TABLE 5
**Adjusted Prevalence Ratios (PR)^a and 95% Confidence Intervals (95% CI)
 between Non Solution of Problem and the Different Variables Examined**

<i>Variables</i>	<i>Adjusted PR</i>	<i>95% CI</i>
Gender		
Men	1.00	–
Women	0.88	0.76 – 1.01
Age		
34 and under	1.00	–
35–44	1.42	1.11 – 1.83
45–54	1.52	1.19 – 1.96
55 or older	1.31	0.95 – 1.81
Job type (gr)		
Managers	0.62	0.41 – 0.93
Professionals	0.86	0.75 – 0.98
Technicians	0.84	0.69 – 1.02
Support staff	1.00	–
Working conditions		
No change	1.00	–
With changes	0.68	0.60 – 0.77

^a Each of the variables of the multivariate model has been adjusted for all the others in the Table.

problem. This study was conducted with a population which had practically never been studied by researchers in the field of rehabilitation. It involved people who had an employment link and who had mostly been working for more than 10 years before experiencing a rather long episode of work disability due to a mental health problem, that is, an average of 6 months for those who had returned to work and often longer for those who were still absent from work.

The study results attest to the importance of occupational factors in the onset of the illness and absence from work. Given that 32% of the subjects said that they had been absent mainly due to their work and almost two-thirds cited both personal and work-related reasons, this means that a total of over 90% of subjects referred to their work life to explain their health deterioration and absence from work. While these results have certain limitations because of a low participation rate, i.e. 52% of respondents, it should be noted that based on age, gender and sector of activity, this sample was nonetheless representative of the whole population (N = 3828). According to Angers (1996), the response rate for this type of questionnaire

rarely exceeds 30%. Therefore, in this context, a 52% response rate is relatively high and probably the highest that could be expected. On the other hand, these results are consistent with those of numerous studies which highlight the fact that in the past years, workplaces have undergone a great deal of upheaval which has had an impact on workers' mental health (Karasek and Theorell, 1990; Dejours 1993, 1995; Niedhammer *et al.*, 1998; van der Doef and Maes, 1999; Stansfeld *et al.*, 1999; Brisson, Larocque and Bourbonnais, 2001; Siegrist and Marmot, 2004; Rugulies *et al.*, 2006; Bourbonnais *et al.*, 2006a, 2006b). Although in modern societies, work is one of the most important forms of social integration, self-accomplishment and identity construction, it is not surprising to note that conversely, in difficult times, work can also markedly affect the health of individuals (Dejours, 1993, 1995; Marmot *et al.*, 1999; Vinet, 2004).

Moreover, this study reveals differences between men and women regarding return-to-work. In fact, more women than men return to work. A first explanation of this phenomenon may be linked to the fact that women hold jobs that are different from those of men and that the jobs performed by women prompt them to return to work earlier. Aronsson, Gustafsson and Dallner's studies (2000) have demonstrated that some types of jobs, in particular in the health and education sectors where women are overrepresented, show a higher risk of "sickness presenteeism," that is, a risk that people will continue working despite feeling that they are sick enough to be absent from work. Given that these occupational activities have an effect on work "presenteeism," they may also influence the occupational reintegration process (Brun *et al.*, 2003). The fact that women return to work earlier may also be associated with their income, which is generally lower than that of men, compounded by the fact that wage loss insurance covers only between 70% and 80% of a worker's salary. Also, it may be that fewer women take advantage of early retirement because a number of them enter the labour market at a later point in their lives and their accumulated pension fund is thus smaller. The difference between women and men can also be explained by the fact that women are more inclined to consult a health professional for their health problem than men, which leads to earlier intervention and thus to a more speedy recovery (Dwight-Johnson *et al.*, 2000; Rhodes *et al.*, 2002). Moreover, the positive effect of the network of social support enjoyed by women compared to men may also come into play. Several studies have shown that women have a wider and more varied social network than men. They are also more likely to have, among the people around them, confidants other than their spouse (Antonucci, 1994; Julien, Julien and Lafontaine, 2000) and can mobilize their help network more easily when they need it (Belle, 1989). Thus, women's support networks could have a positive impact on the development of their illness, favouring an earlier return to work.

The analysis of the occupational reintegration profile based on the main cause of absence from work shows that those who reported having been absent mainly due to factors related to their personal life were significantly more likely to have returned to work. Conversely, those who were absent due only to their work seemed to have more difficulty reintegrating their jobs. On the one hand, it is understandable that it would be more difficult to return to work when this means a return to the situation which contributed to the illness and withdrawal from work. Work overload, non recognition of efforts, conflicts with supervisors and negative work evaluation were identified as the occupational factors which contributed to the absence from work. On the other hand, when work is not a source of tension leading to health deterioration, it is still a preferred place for developing self-esteem and conquering health and, in this sense, it can contribute to rebuilding and strengthening the mental health of a person weakened by individual factors (Dejours, 1995). Work is also a place for socialization which can open onto a helpful and comforting network of social support in the face of stressful events in life outside work (Dejours, 1995; Vinet, 2004). According to Dejours (1998), there is no neutrality regarding work, either it works in favour of health and becomes a powerful means to protect it or it works against health and contributes to its deterioration. The way in which work is "seen" during an absence from work is a major determinant for action. In studies on work-related musculoskeletal disorders, it has become increasingly clear that when transformation is perceived as being possible, this has an effect on the perception of reality. Workers who believe they can change things are more likely to see their musculoskeletal problems improve (Daniellou, 1999). Similarly, studies in the psychodynamics of work have shown that the impossibility of imagining things unfolding differently has a negative effect on mental health (Dejours, 1993; Carpentier-Roy, 2006). It is very difficult to think about a negative situation that one has no power to change.

The analysis of results concerning the solution of mental health problems among those who had returned to work shows that the return to work is not necessarily associated with the solution of mental health problems. In fact, almost 44% of workers who had returned to work considered that their mental health problem had not been solved. These subjects who were at work but whose health problem had not been solved run a worrying risk of relapse. Conti and Burton (1994) have in fact shown that people who are absent due to mental health problems, in particular depression, show a higher risk of relapse compared to those who have other types of health conditions such as high blood pressure, back pain or heart problems.

The analysis of the conditions surrounding occupational reintegration reveals that those who experienced changes which improved their job situation upon their return to work were more likely to have solved their

mental health problem than those who did not experience such changes. These results support the feasibility and plausibility of our hypotheses which suggest that the factors of long-term withdrawal from the workforce are linked to those of occupational reintegration. Given that the work situation is a major vector in the process leading to long-term withdrawal from the workforce, the improvement of the working conditions which contributed to the sickness and withdrawal from work thus becomes a major determinant in the occupational reintegration process and the solution of mental health problems and, consequently, in job retention. Vahtera *et al.*'s studies (2000) have shown that improving psychosocial working conditions can reduce the risk of sickness among workers. Similarly, improved working conditions can also be considered to have a positive impact on recovery from mental health problems and a successful occupational reintegration.

All these results help us to gain a better understanding of the factors involved in the occupational reintegration process. An important contribution of this research is that it has demonstrated that a return to work is not necessarily accompanied by a solution of mental health problems. The results of this study have shown that the solution of mental health problems is significantly associated with the presence of favourable changes in the work situation upon return to work. From this perspective, improved working conditions accompanying the return to work can be considered to be a major determinant in health recovery and a successful return to work, which can in turn ensure job retention for those who have been absent as a result of a mental health problem.

However, some factors linked to the methodology may have introduced biases. These factors involve the research design and information bias. Since the research design was cross-sectional, it measured exposure to socio-occupational variables and return to work or solution of health problems at the same time. Although the association between these variables can be measured based on this research design, causal relations cannot be concluded from it. This study cannot eliminate the potential bias of reverse causation because it is not known, in particular, whether the changes which improved the workers' job situation upon their return to work preceded the solution of mental health problems, or whether the solution led to an over-reporting of working conditions which were favourable to the return to work. However, although no longitudinal studies on return to work have as yet been conducted, several epidemiological studies, some of which were based on longitudinal research designs, have nevertheless documented the effect of work constraints on the prevalence and incidence of work-related mental health problems (Karasek and Theorell, 1990; Niedhammer *et al.*, 1998; van der Doef and Maes, 1999; Stansfeld *et al.*, 1999; Brisson, Larocque and Bourbonnais, 2001; Siegrist and Marmot, 2004; Rugulies *et*

al., 2006; Bourbonnais *et al.*, 2006a, 2006b). Studies have also shown links between intervention targeting the work environment and improvement of employees' mental health (Kawakami *et al.*, 2005; Logan and Ganster, 2005; Bourbonnais *et al.*, 2006a, 2006b). These different results strengthen the plausibility of a link between improvement of working conditions and solution of mental health problems upon employees' return to work. Lastly, an information bias may also be linked to the self-reporting of work-related variables based on perception rather than the use of objective measures of constraints. Nevertheless, the perception of work constraints is probably more important in the development of health problems, and particularly mental health problems, than objective constraints which cannot be perceived as such (Lindstrom, 1994).

Future research should continue in this direction in order to validate these findings. A limitation of this study is that it did not document the factors which allowed for changes to be made in the work situation. To further this investigation, the role of actors who can intervene in return-to-work policies and decisions should be taken into account.

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RÉSUMÉ

Les déterminants du retour au travail à la suite d'une absence en raison d'un problème de santé mentale chez les travailleurs

Au cours des dernières décennies, les milieux de travail ont connu de grands bouleversements qui ne sont pas sans effets sur la capacité de travail et de maintien en emploi des individus, mais aussi sur leur santé mentale. Selon Vinet (2004), la hausse vertigineuse des absences en raison d'un problème de santé mentale au travail et la hausse proportionnelle des primes d'assurance collective qui s'ensuit témoignent de l'ampleur et de la profondeur de ce phénomène. Les problèmes de santé mentale au travail représentent actuellement l'une des plus importantes causes d'absence au travail, et ce phénomène a connu une croissance marquée au cours des dernières années (Banham, 1992; Conti et Burton, 1994; Gabriel et Liimatainen, 2000; Karttunen, 1995; Vézina, 1996; Vézina et Bourbonnais, 2001; Nystuen, Hagen et Herrin, 2001). Ils peuvent avoir des effets particulièrement incapacitants et entraînent généralement de longues périodes d'invalidité, ces problèmes sont persistants en plus de comporter un risque élevé de rechutes (Conti et Burton, 1994; Druss, Schlesinger et Allen, 2001). Des études ont montré que la durée d'une incapacité de travail à la suite d'une dépression serait environ deux fois et demie plus longue que celle occasionnée par d'autres maladies (Gabriel et Liimatainen, 2000). Aussi, l'absence de mesures de soutien lors de la réinsertion professionnelle peut conduire à la construction d'une incapacité permanente de travail et mener à la marginalisation et à l'exclusion sociale. Malgré l'ampleur des absences au travail et l'inquiétude que peut susciter ce phénomène, les études sur la réinsertion professionnelle des travailleurs qui s'absentent en raison d'un problème de santé psychologique demeurent parcellaires. Aussi, les objectifs de cette étude sont, d'une part, de décrire le profil des travailleurs qui se sont absentés en raison d'un problème de santé mentale et, d'autre part, de les comparer selon l'issue de leur réinsertion professionnelle, soit le retour ou non au travail et la résolution ou non de leur problème de santé.

Cette étude a été réalisée à l'aide d'un questionnaire auprès d'employés des secteurs public et parapublic de la santé et des services sociaux, de l'éducation et de la fonction publique du Québec qui se sont absentés de leur travail en raison d'un problème de santé mentale, certifié par un diagnostic médical. Au total, 1 850 répondants ont participé à l'étude soit 74 % (N = 1373) de femmes et 26 % (N = 477) d'hommes.

Les résultats de cette étude rendent compte de l'importance des facteurs professionnels dans la survenue de la maladie et de l'arrêt de travail. Si

l'on tient compte du fait que 32 % des personnes disent s'être absentées essentiellement en raison de leur travail, et que près des deux tiers à la fois pour des raisons personnelles et professionnelles, c'est au total plus de 90 % des sujets qui font référence à leur vie professionnelle pour rendre compte de la détérioration de leur état de santé et de leur arrêt de travail. L'analyse du profil de réinsertion professionnelle selon la principale cause de l'arrêt de travail montre que les personnes qui ont rapporté s'être absentées essentiellement en raison de facteurs liés à leur vie personnelle sont significativement plus nombreuses à être retournées au travail. À l'inverse, celles qui se sont absentées uniquement à cause de leur travail semblent avoir plus de difficultés à réintégrer le travail.

Aussi, l'analyse des résultats concernant la résolution des problèmes de santé mentale chez les personnes qui ont effectué un retour au travail montre que le retour au travail n'est pas nécessairement associé à une résolution des problèmes de santé mentale. En effet, près de 44 % des travailleurs qui ont effectué un retour au travail considèrent que leur problème de santé mentale n'est pas résolu. Ces personnes qui sont au travail, mais dont le problème de santé n'est pas résolu, témoignent d'un potentiel de rechute inquiétant. L'analyse des conditions de réinsertion professionnelle révèle que celles qui ont connu des changements dans leur travail, qui allaient dans le sens d'une amélioration lors de leur retour au travail, sont plus susceptibles de connaître une résolution de leur problème de santé mentale que celles qui n'ont pas connu de changements dans leur travail. Ces résultats soutiennent la faisabilité et la plausibilité de nos hypothèses à l'effet qu'il existe des liens entre les facteurs de désinsertion professionnelle et ceux de la réinsertion professionnelle. L'ensemble de ces résultats permettent de faire un pas vers une meilleure compréhension des facteurs impliqués dans le processus de réinsertion professionnelle.

Une des contributions importantes de cette recherche est d'avoir montré que le retour au travail n'était pas nécessairement accompagné d'une résolution des problèmes de santé mentale. Les résultats de cette étude ont montré une association significative entre la résolution des problèmes de santé mentale et l'occurrence de changements favorables dans le travail au moment du retour en emploi. Dans cette perspective, on comprend que l'amélioration des conditions de travail lors du retour au travail est un déterminant majeur de la restauration de l'état de santé et d'un retour au travail réussi susceptible d'assurer le maintien en emploi des personnes qui se sont absentées à la suite d'un problème de santé mentale.