

A Systematic Review of the Factors which Predict Return to Work for People Suffering Episodes of Poor Mental Health

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Published online: 23 January 2008
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Abstract *Introduction* Poor mental health is responsible for a large percentage of long term work absence, and only 50% of those who are off work for 6 months or more return to work. *Method* We aimed to describe the factors which predict or restrict return to work for people suffering episodes of poor mental health. A literature review was conducted to identify all papers relating to long term mental illness absence. *Results* Fourteen papers of varying methodological quality considered mental health in relation to psychiatric morbidity, depression, stress, and body weight. Successful return to work is predicted by factors related to work, family history, health risk behaviours, social status, and medical condition. *Conclusions* This study identifies a range of factors which are important in preventing return to work for people with mental health conditions. The factors affecting RTW after a period of sickness absence due to poor mental health are wide

ranging and in some cases studies have produced opposing results (particularly in the case of demographic factors). Further research is required to describe the factors which delay return to work for people experiencing episodes of poor mental health.

Keywords Mental health · Occupational health · Workplace · Literature review

Introduction

Mental disorders are common in the United States and internationally. An estimated 26.2 percent of Americans ages 18 and older (about one in four adults) suffer from a diagnosable mental disorder in a given year [1]. At any one time around one in six people of working age in the UK have a mental health problem, most often anxiety or depression and one person in 250 will have a psychotic illness such as schizophrenia or bipolar affective disorder (manic depression) [2]. Some people with severe and enduring mental illness will continue to require care from specialists working in partnership with the independent sector and agencies which provide housing, training, and employment [3].

Having a mental health problem is likely to have a negative impact on employability. The published evidence relating to mental health and work absence covers such items as predictors of major depressive disorder, any psychiatric disorder and mental well being (these terms both being used to denote generic mental health). The available literature appears to focus on stress and depression in terms of lifestyle limitations, or the effects of any generic psychiatric disorder/disability, with no further definitions being given. Tsang [4] considered predictors of employment outcomes for people with psychiatric disabilities and found

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conflicting evidence, but good cognitive function and strong family relationships were statistically significant predictors of returning to work. Michie and Williams [5] looked at the factors positively associated with sickness absence relating to psychological ill health and found that long hours, work overload, pressure, and the effects of these on personal lives, were statistically significant and indicative of absence. Wewiorski and Fabian [6] conducted a systematic review of the association between demographic and diagnostic factors and employment outcomes for people with psychiatric disabilities but drew conclusions about the validity of their meta-analysis method rather than about the employment outcomes. The evidence reviewed in each of the above cases focuses on frequency of absence, short term absence rates and factors which predict absence for people suffering from poor mental health.

Poor mental health (most often anxiety or depression) is regarded as being responsible for a large percentage of work absence over the long term [7] and often leads to job loss. We systematically reviewed the published data on mental health to identify significant prognostic risk factors which are associated with delayed return to work leading to long term sickness absence and job loss. This work contributed to the development of a screening tool used in the UK in order to offer extra support to return to employment [8].

Methods

The literature search aimed to identify all papers relating to return to work (RTW), or risk of job loss resulting from long term absence due to mental illness. The inclusion criteria for the study were papers published between 1985 and 2005, which considered adults of working age (18–65). Editorials, abstracts and individual case studies were excluded as well as information presented in languages other than English, papers which looked at absence for more than 6 months, and papers not recording information on RTW.

Identification of Studies and Assessment of Methodological Quality

Databases were chosen to cover physical and mental health, social science, policy, sickness absence management, termination of employment, occupational and business issues, and general science. The databases searched were PsycINFO, Embase, Medline, OSH-ROM, Assia, Web of Science, Health Information Management Consortium (comprising the Kings Fund and Department of Health data), CINAHL, British Nursing Index, ENB Healthcare, International Bibliography of Social Sciences, and Business Source Premier. Web pages and grey

literature were also searched using search engines (primarily Google), and known web sites (e.g. Department of Health: <http://www.doh.gov.uk>). All references from papers identified in the original search strategy were also searched for additional evidence. Selected key journals (identified by the authors' professional experience) were hand searched (by reading through hard copies published between 1985 and 2005) and searches were conducted on a number of key authors (again identified by professional experience).

A set of concepts was identified and a series of search terms for each assembled through discussion between members of the research team, drawing on their substantial collective knowledge in the field. A combination of free-text and thesaurus terms were identified and used in the search. Each concept (and its block of terms) was searched alone and then combined at concept level into groups of three concepts and re-searched to eliminate overlap and duplication (Table 1). For example the groups of terms relating to health promotion, ill health, and health care were searched independently and then combined to produce a further search. These searches produced papers covering all conditions for a large UK government funded study. Papers relating to mental health were then selected from those obtained.

Data Extraction and Analysis

Abstracts were read by two reviewers and consensus reached on papers to be acquired. Papers were read and critically appraised (based on guidance from the Critical Appraisal Skills Program: (<http://www.phru.nhs.uk/casp/casp.htm>) by two reviewers to reach agreement on which papers to include. Relevant information was extracted into a summary table which was designed by author agreement drawing on previous experience. Each paper was read by two reviewers, and the extraction tables were compared to check for agreement. This included (where stated): source (author, journal, and publication year); population (age, sex, and ethnicity); employment (including job type, occupation, work status, and employer); study (including study type, follow up period, and primary outcome); significant factors affecting the primary outcome; and non-significant factors.

Results

Methodological Quality

In total approximately 8,400 articles were identified from the different search strategies and databases. From these, 519 papers were obtained, of which 420 were accepted and

Table 1 Search concepts and terms used

Concepts	Terms
Risk	Risk factors, risk behavior, lifestyle, alcohol, smoking, drugs misuse, deprivation*
Employment	Industrial, workplace, occupation(al), workdays missed, status, re-employment, employability, workability, absenteeism, occupational health service, management style, capability procedures, unemployment, sickness absence
Income	Statutory sick pay, benefit, pension schemes, insurance
Return to work exposure	Job loss, sickness absence, loss of work, back to work, return to work
Personal factors	Education, loss of fitness (reduced ability to work)
Health promotion	Behavior change
Ill health	Chronic ill health, acute, disability, impairment, functioning, health beliefs, doctor diagnosis, sickness, stress, mental health, retirement
Health care	Referral, consultation, primary care, GP contact, GP certification, rehabilitation
Screening tool	Questionnaire, screening questionnaire, screening tool

* Deprivation; this term is used frequently in the UK to define material disadvantage

99 rejected. Only 15 of these 420 papers considered mental health and are presented here. The studies included nine cohort studies with follow up times varying from 12 to 36 months, and five studies of retrospective interview/questionnaire designs (Table 2). Studies were mostly excluded on the basis of absences greater than 6 months, or not considering RTW. All the studies defined the sample population in terms of the source of the participants and their selection. Meta-analysis of the included studies was considered but rejected as, due to the many different outcomes, a test for heterogeneity could not be completed.

Return to Work

The papers considered mental health and RTW in terms of generic psychiatric morbidity, depression, stress, and individual body weight:

Psychiatric Morbidity

Seven papers considered factors affecting RTW in relation to a broad definition of psychiatric morbidity (mental illness) including any psychiatric morbidity [9, 13], minor psychiatric morbidity [11, 12], psychiatric illness [7], and long term mental disabilities [10, 14].

Psychiatric illnesses were the third most common cause for long-term sickness in women and fourth most common in men in the Whitehall Study of civil servants, whilst actual RTW was affected by work grade and marital status [6]. Leavitt [14] considered whether psychological disturbance extended disability time in compensable back injured industrial workers (worker's compensation), and concluded that people injured at work were disabled longer, independent of psychological status.

Remuneration when sick and off work through company sick pay schemes can have a direct effect on workers' behaviour in terms of numbers of days absence taken and therefore likelihood of RTW. Jenkins [12] associated the presence of minor psychiatric disorder with increased rates of certified sickness absence. On examining the relationship between mental health benefits and RTW Salkever et al. [11], found that a high deductible, longer pre-existing condition and having a carve-out [in the US employers and the state governments, often "carve out" (or separate) mental health and substance abuse benefits from the health insurance plans they sponsor and contract with a specialty managed care vendor to manage this benefit for all their employees] [21]) were features of mental health benefits plans which impacted negatively on the likelihood of RTW. The same data was also presented in a second paper [12].

Reorganization of the workplace also has an impact on psychiatric morbidity. Rowlands and Huws [8] looked at the psychological effects of colliery closures and found that psychological morbidity, potentially harmful behaviour and use of general practitioners were found to have had a significant effect, increasing both the threat of unemployment and the actual unemployment.

Depression

Five studies considered the factors affecting RTW for employees with depression measured in terms of major depressive disorder [16], depression-related short-term disability [22, 23], and the absence or presence of depression [15, 17].

Nieuwenhuijsen [15] looked at supervisory behaviour as a predictor of RTW and found that better communication between supervisor and employer was associated

Table 2 Description of included studies on mental health and return to work

Study	Population	Design	Outcomes	Statistically significant factors negatively affecting RTW ($p < 0.01$)
<i>Psychiatric morbidity</i>				
Barmby et al. [9] (UK)	2049 contract workers (part time) Female	Cohort study 12 months FU	Sickness absence over 1 year	Receiving company sick pay
Stansfeld et al. [7] (UK)	10,308 civil servants in London 66.9% M	Cohort study 30 months FU	Frequency of short (7 days), long (7–21 days) and very long (over 21 days) sickness absence	Lower work grade Widowed, Divorced Single (male) Current psychiatric illness
Jenkins [10] (UK)	252 male, 163 female civil servants, London	Cohort study 12 months FU	Psychological illness Sickness absence	Presence of a minor psychiatric disorder
*Salkever et al. [11] (USA)	407 employees claiming disability insurance 29.24% male	Retrospective study	Return to work Duration of disability claim	Features of mental health benefit plans: high deductible, longer pre-existing condition, carve out (term not explained)
*Salkever et al. [12] (USA)	407 employees claiming disability insurance 29.24% male	Retrospective study	Return to work Duration of disability claim	Features of mental health benefit plans: high deductible, longer pre-existing condition, carve out
Rowlands and Huws [13] (USA)	342 mineworkers Male	Postal survey	Redundancy Re-employment	Low risk of unemployment High alcohol intake
Leavitt [14] (USA)	Low back pain patients 1,373 work injured (71.4% M) 417 non-work injured (50.4% M)	Self completed questionnaire–retrospective	Psychological disturbance Disability time	Injury at work
<i>Depression</i>				
Nieuwenhuijsen et al. [15] (Holland)	85 supervisors of employees 42% M	Cohort study FU at 3, 6 and 12 months	Person related factors Depression, Sickness absence	Poor supervisor/employee communication in non-depressed employees Consulting other professionals
Laitinen-Krispijn and Bijl [16] (Holland)	3,695 male employed persons	Cohort study 12 months FU	Sickness absence Present/absent	Drug dependence Simple phobia Major depressive disorder
Ginexi et al. [17] (USA)	254 recently unemployed Male	Cohort study 12 months FU	Re-employment within 6 months	Re-employment within 6 months Demographics
*Dewa et al. [23] (Canada)	1,521 employees of 3 major financial/ insurance firms 71.6% F	Retrospective data analysis	Depression related disability	Gender (male) Age (older) Severity of reported symptoms
*Dewa [22] (Canada)	1,521 employees of 3 major financial/ insurance firms 71.6% F	Retrospective data analysis	Depression related disability	Gender (male) Age (older) Severity of reported symptoms
<i>Stress</i>				
Russell et al. [18] (Australia)	95 subjects followed after a work-related stress injury Male	Cohort study 24 months FU	Return to work	Longer time off sick
Young and Russell [19] (Australia)	119 teachers 69F 50M	Cohort study 12 months FU	Attempted to return to work	Not attempted to return to work “Health behaviors” (not defined) Gender (female)

Table 2 continued

Study	Population	Design	Outcomes	Statistically significant factors negatively affecting RTW ($p < 0.01$)
Semmer and Zapf [24] (UK)	932 blue collar workers of steel and automobile companies Male	Self-reported and observer indicators	Estimating latent job stressors	High job stressors (not defined)
<i>Body weight</i>				
Parkes [20] (USA)	185 female student nurses	Cohort study 33 months FU	Medically certified sickness and absence from work	Weight (underweight and overweight) Smoking

* These studies by the same authors originate from the same data set

with full time RTW only in non-depressed employees. Supervisor consultation with other professionals was associated with longer time to RTW. Where supervisors were responsible for RTW or where there were financial implications for the department, communication with the employer and consultation with other professionals were both improved, resulting in better RTW rates. Laitinen-Krispijñ and Bijl [16] looked at employee sickness absences over 12 months and found that major depressive disorder, dysthymia, simple phobia, and drug abuse/dependence were predictors of sickness absence in men only. Using data from three major Canadian financial/insurance sector employers, presented in two separate papers, Dewa [22, 23] found that depression affected more employees than the more severe nervous and mental disorders (not detailed), lasted longer and had a higher rate of recurrence. Although, at the end of an episode, more than three quarters of employees did RTW, proportionally less male workers returned. Younger adults were more likely to terminate their employment whilst older adults were more likely to take long-term disability and job classification had no impact on this. Re-employment within 6 months was predictive of decline in depressive symptoms [17].

Stress

Three studies considered the impact of work related stress on RTW. Russell [18] concluded that the best predictor of RTW was if the individual had attempted to RTW within 505 days after leaving the workplace. For teachers in Australia off work for work related stress, individual health behaviours were the predictive factors for return to work [19]. Semmer [24] identified a small number of specific job stressors, which affected RTW in a population of blue collar workers.

Weight

Mental health and relative weight along with smoking were considered as predictors of sickness and absence from work by Parkes [20]. This longitudinal study concluded that there was a relationship between relative weight and absence, with smoking showing an additive effect. A further relationship was found between social dysfunction and relative weight with particularly high levels of absence seen in those of high relative weight who also reported high levels of social dysfunction. It is generally accepted that weight is associated with self esteem issues which is an area of mental health importance.

Risk Factors

The significant risk factors identified in the above studies as preventing successful RTW after a period of sickness absence due to poor mental health can be categorized as work factors, health risk behaviours, social status and demographics, and medical factors (Table 3).

Work factors [7, 9, 11–15, 17–19, 24] including “low job grade” (not defined by the authors), high job stressors, re-organisational stress, threat of unemployment, injury at work, no worker’s insurance, and not attempting to RTW within 505 days were the most frequently cited, being significant in ten studies (presented in 11 papers). Social status and demographics, including marital status (widowed, divorced, single), age (older), gender (male or female depending on study), and education (low) were significant in four studies [7, 17, 19, 22, 23] (presented in 5 papers) as were health risk behaviours including weight (underweight, overweight), smoker, and being drug dependent [9, 16, 19, 20]. Medical factors including type of phobia, presence of minor psychiatric disorder, and severity of symptoms, were significant in four cases [7, 17, 19, 22].

Table 3 Risk factors preventing return to work

Study and category	Work related factors	Health risk behaviours	Social status and demographics	Medical factors
<i>Psychiatric morbidity</i>				
Barmby et al. [9]	Company sick pay			
Stansfeld et al. [7]	Lower work grade		Widowed Divorced Single (male)	Psychiatric illness
Jenkins [10]				Minor psychiatric disorder
Salkever et al. [11, 12]	Features of benefit plan			
Rowlands and Huws [13]	Risk of unemployment	Alcohol intake high		
Leavitt [14]	Injury at work			
<i>Depression</i>				
Nieuwenhuijsen et al. [15]	Supervisor/ employer communication Consulting professionals			
Laitinen-Krispijn and Bijl [16]		Drug dependence		Simple phobia Major depressive disorder
Ginexi et al. [17]	Re-employment within 6 months		Demographics	
Dewa et al. [22, 23]			Gender (male) Age (older)	Severity of symptoms
<i>Stress</i>				
Russell et al. [18]	Not RTW in first 505 days			
Young and Russell [19]	Not attempted to return to work	“Health behaviours”	Gender (female)	
Semmer and Zapf [24]	High job stressors			
<i>Body weight</i>				
Parkes [20]		Overweight Underweight Smoker		

The definition of work absence differed in the studies as very few studies considered absence due primarily to mental health, most studies considered absence due to other factors with mental health being a contributory factor in predicting length of time off work and probability of returning to work. Therefore although some of the risk factors identified here are more common, the limitations of the available literature and the variability in population and condition considered mean we must be cautious in generalizing the findings of these results. Due to these limitations it is not possible to identify major risk factors for particular conditions or situations.

Discussion

Summary

This study identifies a range of factors that are important in preventing return to work for people with mental health conditions. The factors affecting RTW after a period of sickness absence due to poor mental health are

wide ranging and, in some cases, studies have produced opposing results (particularly in the case of demographic factors). Of the papers identified in the literature review, the majority related only indirectly to sickness absence and frequently with no consideration of RTW or job loss. Most studies considered short term, frequent absences with little consideration of the issues affecting longer term sickness absence leading to job loss. The volume of research reflects the fact that mental health and behavioural or psychological factors are anecdotally regarded as causing or prolonging sickness absence but there is little robust evidence, and contradicting conclusions as to which of the multiple risk factors for poor mental health carry most risk of sickness absence and job loss.

The definitions of poor mental health also varied widely and were poorly defined. In most cases where authors looked at all cases of poor mental health, terms such as psychiatric morbidity/illness were used without giving inclusion criteria. The definitions used in the individual papers are replicated through out this review to ensure that no misinterpretation occurs.

Strengths and Weaknesses

These results were produced as a result of a large systematic review looking at factors affecting return to work and job loss for all medical conditions. This gave the study significant time and power in order to complete a very rigorous review. However, presenting the results in terms of individual conditions, in this case conditions relating to poor mental health may mean that some of the key messages from the overall review cannot be clearly justified.

Also many of the studies were conducted in restricted populations selected in tertiary referral centres (e.g., hospital outpatients or inpatients), in specific occupations (e.g., nurses or teachers), or for uncommon, severe conditions (e.g., coronary bypass graft or spinal surgery). Also, the studies included here were conducted in only five different countries. Each country has its own unique benefits structure which might have an impact on mental health outcomes, and with the currently available literature, our ability to examine the impact on any intervention under different benefit systems is severely limited. This combined with other cultural, country specific factors including population structure and social norms means that the applicability of research conducted in these restricted groups to other populations in general is debatable.

Give the multifactorial nature of risk factors for job loss it was difficult to construct a search strategy to cover the field. There were a surprising lack of hits in major databases on basic search terms such as “employment AND ill health” or “impairment AND job loss”, testified to difficulties in finding papers focussed on the exact issue of risk factors for job loss. It may also reflect the issues that library MeSH (Medical Subject Heading) terminology does not recognize these as research issues.

It is important to note that it was only possible to state which factors were reported as significant in influencing RTW out of the large number studied by different authors. This results in an under representation of the total number of factors affecting RTW as most authors examined and reported on only the few factors found to be statistically significant in their studies. In most cases they did not state which factors they had considered and researched but which had no measured effect on RTW or long term sickness absence. It has also been argued by Baldwin [25] that return to work is a misleading measure of the effectiveness of health care. As we have discussed here, return to work is influenced (perhaps primarily) by factors not related directly to health care. Baldwin also considers the likelihood of subsequent episodes of poor health and work absence following initial return to work. This indicates that in order for return to work to be a valid predictor, it is necessary to evaluate over a time period long enough to account for multiple patterns of work absence.

In reference to the demographic factors predicting RTW, some studies appear to present conflicting views on which factors affect RTW. These are particularly notable in relation to the factor of sex where being male [22] or female [19] may have a negative effect on RTW; although these papers did consider different medical conditions which may explain the variation.

Interventions, Further Research and Implications for Policy

This review has demonstrated that sickness absence is multifactorial due to many factors combining at one time to impact on a person's life. Loss of one's job can be the result of much more than a health problem alone as is demonstrated by the evidence we have presented.

We found very few papers which researched individual mental health conditions and risk of job loss. Most papers which the main review identified related to pain, low back pain and other musculo-skeletal conditions, or orthopedic and trauma (including brain injury). There is also a strong literature on mental health absence compared to other conditions. For example Conti and Burton showed that employees with depressive disorders are significantly more likely ($p < 0.01$) to have repeated bouts of disability and, therefore, sickness absence than employees with diabetes, low back pain, heart disease or hypertension [26].

Further research is needed to confirm the factors which can predict job loss as a result of long term work absence due to mental health condition in the general population. Factors relating to the individual need to be considered along side system related factors. Seven directions for further research have been suggested by Goldner et al. [27]. One of these, the relationship of population factors in disability management and return to work highlights the need to consider issues relating to culture, gender, age, and environment in future research [26]. Organizational interventions and the appropriateness of standard mental health care in encouraging return to work also need to be considered. It has also been suggested that interventions to address long term work absence (and indeed any medical intervention) would be more effective if guided by a theoretical framework [28].

In research into factors affecting return to work for conditions other than poor mental health, the issues reported most frequently are higher levels of pain/discomfort, more severe condition, age, gender, race, education level, socio-economic status, length of absence, insurance claims and manual vs. skilled work [7]. Further studies of these factors in relationship to mental health may therefore be beneficial.

The papers presented here appear (anecdotally if not implicitly) to be based on a purely medical model of care

which although beneficial in addressing physical illness may miss important aspects when considering mental health. This may be because the papers are condition specific and therefore do not consider social interactions and the wider impacts on health as clearly consideration of the social determinants of health is particularly vital for mental health.

Recent completion of the UK Government's Job Retention and Rehabilitation Pilot [8] should contribute new data and give a better understanding of the factors which delay RTW for people experiencing episodes of poor mental health and other conditions, which may also have implications for those working in other populations.

Acknowledgements This research was commissioned and funded by the Department of Work and Pensions (UK Government). The authors acknowledge the contribution of Mr Andrew Booth, Senior Lecturer in Evidence-based Medicine, University of Sheffield, in assisting with literature searching strategies. This work was carried out at the School of Health and Related Research at the University of Sheffield along with support from colleagues at the University of Glasgow. This study was funded by the Department of Work and Pensions (UK Government). The authors have no competing interests to declare.

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