



**Service Priorities and Programmes**  
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**A Correlation Study of Patient's Physical and Psychological Status for a Return-to-Work Intervention – Implications for Better Service**

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**Introduction**

Studies found that around 12.5% of all work absence was attributable to back pain in UK (Bevan 2012). At present there is insufficient evidence on accurately predicating, at the start of work absence, who are likely to have a poor long-term outcome. Inadequate evidence was available to support a strategy in which intervention should be targeted to those difficult to return to work after injury.

**Objectives**

The objective of this study was to determine whether, among patients with disabling low back pain (LBP), the commonly used physical and psychological factors in the initial assessment well correlate with their return to work status after intervention.

**Methodology**

This was a correlation study. Patients who have injured their back at work of less than eight weeks were invited to join the back rehabilitation physiotherapy program. In addition to the conventional physiotherapy treatment, the patients screened with high fear avoidance belief (Fear-Avoidance Beliefs Questionnaire (FABQ)-Physical activity  $\geq 14$  and FABQ-Work  $\geq 34$ ) were invited to join the cognitive behavioral-based physiotherapy program (CBT). Patients were discharged from the program when the condition improved or reached static condition. The intake data collected upon patient intake were correlated with the work status upon discharge, that discharged with a sick leave status or resumed work. The proposed predictive factors were (1) Numeric Pain Rating Scale (NPRS) for intensity of pain; (2) Roland Morris Disability Questionnaire (RMDQ) for functional disability; (3) Hospital Anxiety and Depression Scale (HADS-Anxiety and HADS-Depression) for screening of anxiety and depression; (4) FABQ-Physical Activity and FABQ-Work for fear-avoidance belief. SPSS software version 16 was used and logistic regression analysis was performed to study the correlation.

**Result**

From August 2007 to December 2013, a total of 1,591 patients (mean age of  $43.4 \pm$

14.9 years old, 608 female and 983 male) were recruited. There were 741 (46.6%) and 850 (53.4%) patients are on sick leave and return to work upon discharge respectively. All the intake data, including intensity of pain, functional disability, anxiety and depression mood and fear avoidance belief, were found to be as significant factors correlated well with the work status of patients upon discharge. The odd ratio for NPRS was 0.85 (95%CI, 0.81 to 0.90;  $p<0.01$ ), RMDQ 0.93 (95%CI, 0.91 to 0.95;  $p<0.01$ ), HADS-Anxiety 0.93 (95%CI, 0.91 to 0.96;  $p<0.01$ ), HADS-Depression 0.92 (95%CI, 0.90 to 0.94;  $p<0.01$ ), FABQ-Physical activity 0.97 (95%CI, 0.95 to 0.99;  $p<0.01$ ) and FABQ-Work 0.96 (95%CI, 0.94 to 0.97;  $p<0.01$ ). Identification of different physical and psychological factors associated with long-term absence from work facilitates the physiotherapists to target a better approach towards patients of high risk in prolonged sick leave. In order to promote an early return-to-work to enable a better workforce in the society, awareness of health professionals for identifying the physical and psychological risk factors for poor outcome should be reinforced to enhance the cost effectiveness in the management of work-related back pain patients.