



Service Priorities and Programmes
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**Evaluation of a 6 – Year Return-to-Work Cognitive-Behavioural Based
Physiotherapy Back Rehabilitation Program**

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Introduction

Studies have found that psychological factors, such as maladaptive responses to movement-related pain, beliefs about physical capabilities, and fear-avoidance beliefs, contributed to predicting a greater likelihood of experiencing chronic disability. Thus, developing an effective treatment program to address the dysfunctional emotions and maladaptive behaviors may help to promote recovery and also facilitate early return to work. The objective of this study was to determine whether, among patients with disabling low back pain (LBP), a program of exercise and education using a cognitive behavioral therapy (CBT) approach, was able to reduce pain, disability, fear-avoidance belief and also anxiety and depression.

Objectives

This was a pre- and post-test study. Patients who have injured their back at work of less than eight weeks and found to have high fear avoidance beliefs (Fear-Avoidance Beliefs Questionnaire (FABQ)-Physical activity ≥ 14 and FABQ-Work ≥ 34) were invited to join the cognitive behavioral-based physiotherapy program (CBT). In addition to conventional physiotherapy treatment, the CBT program included advices on pacing of activity, counsel on distorted beliefs about activity, and assistance on identification of helpful and unhelpful thoughts about pain and activity. Outcome measures were (1) Numerical Global Rating of Change Scale (NGRCS) for subjective reported improvement; (2) Numeric Pain Rating Scale (NPRS) for intensity of pain; (3) Roland Morris Disability Questionnaire (RMDQ) for functional disability; (4) Hospital Anxiety and Depression Scale (HADS-Anxiety and HADS-Depression) for screening of anxiety and depression; (5) FABQ-Physical Activity and FABQ-Work for fear-avoidance belief. SPSS software version 11 was used to analyses the data.

Methodology

From August 2007 to December 2013, a total of 585 patients (mean age of 41.4 ± 14.6 years old, 259 female and 326 male) with high fear avoidance beliefs were recruited. All the outcome measures, including subjective reported improvement, intensity of pain, functional disability, anxiety and depression mood and fear

avoidance belief, were significantly improved. The mean value of NGRCS was 5.64 ± 3.7 . The post-program evaluation of NPRS (6.7 ± 1.4 to 4.6 ± 2.8 with $p < 0.001$), RMDQ (15.6 ± 4.2 to 12.8 ± 5.2 with $p < 0.001$), HADS-Anxiety (11.6 ± 4.5 to 8.1 ± 5.1 with $p < 0.001$), HADS-Depression (11.6 ± 3.5 to 9.6 ± 4.9 with $p < 0.001$), FABQ-Physical activity (21.4 ± 3.4 to 18.1 ± 4.7 with $p < 0.001$) and FABQ-Work (37.3 ± 3.5 to 32.3 ± 8.2 with $p < 0.001$) were found to be significantly improved. The return to work rate was found to be 52.6%.

Result

The outcome of our study was found to be comparable with a similar study by Johnson et al (2007), which demonstrated a NPRS change of 1.6 with RMDQ change of 3.2 in their intervention group with active exercise and education using a CBT-based physiotherapy. Therefore, it showed that CBT-based physiotherapy treatment influences back pain, functional disability, fear-avoidance belief, anxiety and depression in a positive way. RCT studies are recommended for further investigation on the effectiveness of the programme.