

PREDICTORS OF SHORT- TERM OUTCOME IN PATIENTS WITH NON-SPECIFIC CHRONIC LOW BACK PAIN UNDERGOING AN EDUCATION AND EXERCISE REHABILITATION PROGRAMME

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Introduction

Physiotherapy is a common treatment option for patients with non-specific chronic low back pain (NSCLBP), and the best evidence suggests that treatments involving education and exercise are more effective than other conservative approaches. However, the relative contribution of individual prognostic factors to successful response to treatment remains unclear.

Purpose/ aim

The aim of this study was to describe the clinical course of a sample of patients with NSCLBP undergoing a rehabilitation programme covered, education and exercise, and to identify prognostic factors for recovery.

Material and Methods

A prospective single arm cohort study design, with an inception cohort of 62 NSCLBP patients, initiating a 6-week rehabilitation physiotherapy treatment. Participants were considered eligible if they had pain in the back for at least 3 months, with or without leg pain, and were aged between 18 and 65 years.

Patients were assessed at the baseline and immediately after 6 weeks. Socio-demographic, clinical and psychosocial factors were included as potential predictors of outcome. Based on a previous study, treatment recovery was defined as the Quebec Back Pain Disability Scale (QBPD, 0-100) score improving ≥ 7 (minimal clinically important difference-MCID) and the Visual Analogue Scale (VAS, 0-10) score improving ≥ 2 (MCID). Uni and multivariate logistic regression analyses were used to evaluate factors associated with treatment recovery.

Results

Of the 70 patients enrolled in the programme, 62 completed the follow-up (mean age of 50.6 ± 10.2). Differences between baseline and follow-up results showed a significant reduction in pain intensity (6.5 ± 2.35 to 3.2 ± 2.12 , $p=0.001$) and disability (40.76 ± 15.14 to 29.74 ± 14.64 , $p=0.001$). For the outcome "disability", 39 participants (62.9%) were categorized as treatment recovery and 23 as treatment failure (37.1%). After using a logistic regression analysis the likelihood of a successful recovery was statistically associated with high levels of disability (OR 1.1, CI 95% 1.04-1.16), and low levels of pain intensity (OR 0.66, CI 95% 0.46-0.97), at baseline. The logistic regression model was statistically significant ($\chi^2(6) = 25.195$, $p < 0.0001$) and explained 46.4% (Nagelkerke R^2) of the variance in the improvement of the disability above the MCID. The model correctly classified 80.3% of the patients (sensitivity, 87.2%; specificity, 68.2%). For the "pain" outcome, pain reduction was significantly associated with high levels of pain intensity at the baseline (OR 1.66, CI 95% 1.2-2.4). The model correctly classified 73.8% of the patients with an explained variance of 39.4% (sensitivity, 89.1%; specificity, 26.7%).

Conclusions:

These results suggest that disability recovery was related with high levels of disability and low levels of pain intensity at the baseline. In contrast, pain recovery, was related with high levels of pain intensity.

Keywords

Non-Specific Chronic Low Back Pain; Physiotherapy; Outcome Predictors