



1026

## EFFECTIVENESS OF PAIN NEUROPHYSIOLOGY EDUCATION AND EXERCISE IN THE MANAGEMENT OF CHRONIC LOW BACK PAIN: A SINGLE CASE STUDY

D. Pires<sup>1</sup>, D. Costa<sup>2</sup>, C. Caeiro<sup>2</sup>, E. Cruz<sup>2</sup>

<sup>1</sup>Physiotherapy, Instituto Politécnico de Castelo Branco - Escola Superior de Saúde Dr. Lopes Dias, Castelo Branco, <sup>2</sup>Physiotherapy, Instituto Politécnico de Setúbal - Escola Superior de Saúde, Setúbal, Portugal

**Background and aims:** The presence of central nervous sensitization has been reported in a subgroup of patients with Chronic Low Back Pain (CLBP). In these patients, a primary goal for health professionals is to help change maladaptive pain cognitions and illness perceptions to introduce normal movement and activity.

**Methods:** A single case study design was used to evaluate the effectiveness of 2 sessions of neurophysiology pain education (NPE) followed by 10 sessions of exercise in a 48-year-old woman with a 12 years history of CLBP. The study involved a pre-treatment phase, a 6-week treatment phase and 1-year post-treatment home exercise phase. Pain intensity was assessed by the visual analog scale, functional disability by the Quebec Back Pain Disability Scale and the fear-avoidance beliefs by the Fear-Avoidance Beliefs Questionnaire. Information concerning pain reconceptualization was collected through a semi-structured interview and used to develop a better understanding about the quantitative results. The patient was assessed at the baseline, 1, 3 and 6 weeks and at 1, 3, 6 and 12 months post- treatment.

**Results:** Following the NPE sessions there was a decrease in pain intensity and functional disability. Through pain reconceptualization, maladaptive pain cognitions were changed. Pain intensity, fear-avoidance beliefs and functional disability improved over the six-week treatment phase and maintained over the 1-year follow up.

**Conclusions:** The single case limits generalization of findings. This results support the appropriateness of NPE followed by an exercise program in the management of CLBP suggesting that further research is relevant.