E-Poster

EP-370

Pain and Disability in University Students With Non-Specific Low Back Pain Participants in a Comprehensive Physical Therapy Program

Topic: Pain

Carolina Ramírez Ramírez, María Cristina Rodríguez

Physical Therapy, Universidad Industrial de Santander, Bucaramanga, Colombia

BACKGROUND

Non-specific low back pain (NSLBP) is a frequent issue among university students. Physical modalities, conventional exercise, lumbopelvic stabilization exercises, and education have individually shown benefits in treating this population. The aim of this work was to analyze the effect on pain and disability of a comprehensive physical therapy program for university students with NSLBP.

METHODS

Quasi-experimental study with university students referred to Physiotherapy due to NSLBP. Students with diagnoses of herniated disc, spondylosis, spondylolisthesis, history of fractures or vertebral tumors were excluded. Sociodemographic information, pain intensity with the Visual Analog Scale (VAS) and disability with the Oswestry Disability Index (ODI) were recorded at the beginning and end of treatment, which consisted of: a) Physical modalities for 10 minutes; b) Active range of motion exercises for the spine and hip for 5 minutes; c) Lumbopelvic stabilization exercises in three phases: 1) Initial: activation of local muscles (transverse abdominis and multifidus) in supine; 2) Intermediate: exercises in different postures with limb movements (quadruped with alternating elevation of limbs, anterior bridge, lateral bridge with support on knees and feet) while activating deep muscles; 3) Advanced: dynamic exercises on unstable surfaces. Three sets of 10 repetitions were performed, or three sets of 30 seconds, depending on the exercise. d) Thoracolumbar and hip stretches for 10 minutes. e) Education on pain physiology and postural recommendations; f) Home exercise plan. Treatment was performed 2-3 times/week, for 6-8 weeks. All procedures were performed according to the Declaration of Helsinki and participants signed an informed consent. The data were analyzed using STATISTICA 13.3 software. Data normality was determined using Shapiro-Wilk, the paired t-Student test was applied, a p value < 0.05 was established, and the effect size was analyzed using Cohen's d.

RESULTS

Twenty-four single students, with 21.1±2.2 years old, 50% women and BMI < 25, were included who performed 10 ± 3 sessions. Pain intensity was significantly reduced ($p < 0.05$) when comparing the initial mean (4.4 SD: 2.8) with the final mean (0.4 SD: 0.2), with an effect size of 1.9. Also, disability was significantly reduced ($p < 0.05$), with an effect size of 1.1 (Cohen's d).

CONCLUSION

Comprehensive physical therapy program for university students with NSLBP had a beneficial effect on pain intensity, and that was large enough to be clinically meaningful; as well as a significant reduction in disability, with a large effect size, were observed when performing 10 ± 3 sessions, in a period of 6-8 weeks.

Statement of Disclosures

None.

Corresponding Author:
Carolina Ramírez Ramírez
Physical Therapy, Universidad Industrial de Santander, Bucaramanga, Colombia
Email: fisiocaro@gmail.com

Doi: 10.5606/archisprm.2026.EP-370