

Abstract

Title: Effect comparison of educational-movement therapy “stabilization function“of a trunk and traditional rehabilitation therapeutic approach for patients with nonspecific low back pain.

Nonspecific low back pain is a main cause of disability and the principal cause for injury-related lost work-days. The various therapies for nonspecific low back pain have been elaborated in many studies. The recommended therapeutic guideline for primary care of patients with nonspecific low back pain is early mobilization combined with a specific rehabilitation therapeutic approach. One such specific rehabilitation therapeutic approach is “trunk stabilization” therapy.

The objective of this dissertation is to compare a therapeutic approach involving “stabilization exercises” with the traditional clinical approach that has been clinically proven to be most efficacious for patients with acute nonspecific low back pain.

This study compares the effects of the prescribed therapies on 24 patients with non-specific acute low back pain. The test subjects (men and women with an average age 41.2 years) were allocated into two simple randomized subgroups. The test subjects received 2 outpatient therapy sessions per week for 4 weeks. Pre-test and post-test spine shape and range of motion examination were determined using kinematic analysis Qualisys. Pre-test and post-test pain levels were evaluated using the short-form McGill pain questionnaire (SF MPQ) (Czech version). Pre-test and post-test disability was evaluated using the Roland-Morris disability questionnaire (RMDQ) (Czech version). Approach effectiveness was determined based upon statistical level $p=0.05$. The tested interventional therapies included trunk stabilization therapy and the traditional clinical therapy approach. Spinal kyphosis and

There was not statistically meaningful difference between trunk stabilization therapy and the traditional clinical approach on lordosis curves or right range of trunk rotation. The left range of trunk rotation had boundary value of improvement of left trunk rotation ($p=0.057$). Patients in the “trunk stabilization” therapy group showed a statistically significant improvement in right range of trunk rotation ($p=0.036$). Patients in both therapy groups showed improvement in pain intensity and pain quality. Patients in the “trunk stabilization” therapy group showed a statistically significant improvement in depth of thoracic kyphosis ($p=0.02$). The post-test RMDQ evaluation of disability perception for the trunk stabilization therapy group showed a statistically significant improvement of patient perceptions compared

to the traditional clinical therapy approach group ($p = 0.02$). This study indicates that “trunk stabilization” therapy may have a statistically significant therapeutic effect on spine erection and disability perception for patients with nonspecific low back pain; however, the results have limited validity in light of the low number of study participants. Future longitudinal studies should examine the long-term effect of “trunk stabilization” therapy for patients with nonspecific low back pain.

Key words: „trunk stabilization“ approach, acute nonspecific low back pain, and therapy effectt