

# TEST OF FEASIBILITY AND EFFECTIVENESS OF A CHAIR-BASED EXERCISE THERAPY MODEL FOR RECOVERY OF PAIN, ROM, AND FUNCTIONAL ABILITY IN THE ELDERLY PATIENTS WITH CHRONIC LOW BACK PAIN

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## ABSTRACT

Low back pain (LBP) is a condition of pain in the lower back that occurs in all humans. The highest prevalence occurs in the elderly (seniors), thus affecting their level of independence. This condition can increase disability and have a negative impact on the quality of life of the elderly. To overcome this problem, an effective and efficient training model is needed to treat chronic low back pain in the elderly. One of them is a chair-based exercise therapy model.

This study aims to test the feasibility and effectiveness of a chair-based exercise therapy model for pain recovery, ROM, and functional ability in elderly people suffering from chronic low back pain. The research and development method carried out uses the ADDIE model (Analyze, Design, Development, Implementation, Evaluation). The first stage uses a qualitative descriptive research design including the Analyze, Design and Development stages. The second stage is Implementation and Evaluation. In the Implementation Stage, small-scale and large-scale field trials were carried out. The research design used a pre-experimental single treatment design. Data analysis using product moment. In the Evaluation Stage, the effectiveness of the chair-based exercise therapy model was tested for pain recovery, ROM and functional ability in elderly people suffering from chronic low back pain. The research design uses pre-experiment with one group pre test post test design. Data collection techniques used VAS (Visual Analog Scale), Goniometer, and Modified Oswestry Disability Index (M-ODI) instruments. The data analysis technique used is the paired sample t-test statistical test and the non-parametric Wilcoxon Signed Rank Test.

Based on the results of small scale trials with a score of 329 (94%) and large scale with a score of 730 (97.33%) it shows that overall the subjects agreed that the chair-based exercise therapy model was appropriate and useful for pain relief, increasing ROM and functional ability. in elderly people suffering from chronic low back pain. Based on the results of the analysis of the paired sample t-test and the Wilcoxon Signed Rank Test, the calculated t value was obtained with a significance of 0.000. Because the significance value is smaller than 0.05 ( $p < 0.05$ ), it has been proven that there is a decrease in pain levels with a value of 4.960; increase in flexion ROM with a value of 23.003; hyperextension ROM with a value of 4.635; increase in lateral flexion ROM with a value of 18.647; ROM rotation with a value of 16.668 and ODI increase with a value of 4.625. Overall, it can be concluded that the chair-based exercise therapy model is effective for pain relief, increasing ROM and functional ability in elderly people suffering from chronic low back pain.

Kata Kunci: *Exercise therapy; Pain, ROM, Functional ability, Low back pain; Elderly*