

Development of a Chair-Based Exercise Model for Sufferers of Low Back Pain

by Prof. Dr. dr. BM. Wara Kushartanti, M.S.

ABSTRACT

Low back pain (LBP) has occurred all over the world. Low Back Pain (LBP) is a musculoskeletal disorder caused by poor body activity or movements, such as bending, pushing, squatting, lifting positions, jumping, running, standing or sitting for too long, even when wearing socks and shoes, or other movements. LBP disorders also occur in many indoor activities by working only at a desk and chair. The large number of sedentary activities at work due to too much sitting in front of computers/laptops or gadgets results in tension in the muscles which can trigger LBP. LBP can be treated with pharmacological and non-pharmacological treatment. One way to reduce and prevent the occurrence of LBP is by doing exercise therapy. There are many recommended exercise therapies for LBP sufferers, one of which is chair-based exercises.

This study aims to develop a chair-based exercise model for patients with low back pain (LBP) that is feasible, practical, and effective for pain recovery, increasing flexibility and increasing functional ability for sufferers of Chronic LBP. The chair-based exercise development model provided can be carried out by LBP sufferers independently so that it can be done anywhere either at home, at the office, at school, or even in public places where chairs are available as a medium for carrying out exercises in preventing and helping recovery for LBP sufferers.

This research is development research using the ADDIE model (Analyze, Design, Development, Implementation, Evaluation). The research procedure in the first stage uses a qualitative descriptive research design. In the Analyze phase, activities are carried out by collecting information in the form of needs analysis and document analysis. Data collection techniques using the Mendeley technique, and data analysis using qualitative thematic. At the Design stage, an assessment is carried out by experts to develop a chair-based exercise model design for LBP sufferers. This Development stage is the stage of realizing the exercise therapy that has been made in the design stage so that it becomes a product that is expertly validated and ready to be tested. Participants in this study were documents and seven experts. Data analysis uses the Aiken formula. The second stage is Implementation and Evaluation, but the second stage is carried out in the following year. Participants in this study were patients with mild LBP (chronic nonspecific LBP).

Based on the results of the validity calculation using Aiken's V index, the results obtained from the 10 statement items obtained the lowest V score of 0.786 and the highest V score of 0.893. Drawing conclusions about whether or not the item is valid is done by comparing the calculated V score with the V table value. The V table value for items assessed by 7 raters/validators with 5 alternative scale choices at a significance level of 5% obtained a V table value of 0.750. It can be concluded that all items have a score of V greater than the V table (0.750), meaning that all items are declared valid. Based on the results of the validity test, it can be concluded that the chair-based exercise model for patients with chronic non-specific LBP is declared valid in terms of the clarity of the objectives of the exercise model such as reducing pain, increasing flexibility, and restoration of functional ability. Besides that, this training model is valid in terms of ease of movement, safety, clarity and implementation instructions according to the needs of users or patients with chronic non-specific LBP.

Kata Kunci: *Exercise; exercise therapy; Low back pain*