

# Efficacy of Lower Extremity Neuromuscular Exercises on Balance and Functional Level among Osteoarthritis Knee

M Kaviyarasi<sup>1</sup>, Shenbaga Sundaram Subramanian<sup>2</sup>, Senthil Purushothaman<sup>3</sup>

<sup>1</sup>Undergraduate student, <sup>2</sup>Associate Professor, <sup>3</sup>Professor and Dean i/c, Chettinad School of Physiotherapy (CSP), Chettinad Hospital and Research Institute (CHRI), Chettinad Academy of Research and Education (CARE) Kelambakkam, TamilNadu, India.

**Email Id:** kavimathi1203@gmail.com

## Abstract

*Background of the study:* Degenerative joint diseases, such as osteoarthritis, cause the joint's tissues to deteriorate over time. Joint discomfort and temporary stiffness following inactivity or rest are common symptoms of osteoarthritis in people. Fewer literature articles about neuromuscular exercise were found. If validated, this easy-to-do activity will be recommended as a home workout for osteoarthritis.

*Methods:* After obtaining informed consent, 50 subjects were selected for the study. Based on their inclusion and exclusion criteria, the subjects are between 40 and 50. A pre-test first evaluates the individuals. After 6 weeks of the neuromuscular exercise program, post-test values will be taken for the patients with knee osteoarthritis. The study parameters include the KOOS scale for functional ability and SEBT for balance, and the pre-test and post-test comparison was done after 6 weeks of exercise.

*Results:* Both pre-test and post-test measures will be analyzed statistically using a t-test to test the effectiveness of each technique. On comparing the mean values of the Pre-test, KOOS is 0.9310. Post-test KOOS is 0.3774, the Mean value for Pre-test anterior SEBT is 25.2322, and for Post-test anterior SEBT is 31.4302, the Mean value for Pre-test anterolateral SEBT is 21.1714. For the post-test, the anterolateral SEBT is 23.3976, the mean value for the pre-test lateral SEBT is 20.1184, and for the post-test, the lateral SEBT is 25.1406.

*Conclusion:* The treatments were effective in both function and balance. When functional ability was measured, balance improved more.