

## **Effects of Self-management Program as Adjunctive to Usual Rehabilitation Exercise on Pain and Functional Outcomes in Knee Osteoarthritis: A Randomized Controlled Trial**

### **ABSTRACT**

Background: Home-based exercise (HBE) and patient education (EDU) have been reported as beneficial additions to usual knee osteoarthritis (KOA) rehabilitation. However, previous trials mostly examined the effects of HBE and EDU separately. Thus, this study aimed to evaluate the effects of a structured combined HBE and EDU program in addition to usual KOA rehabilitation on pain score, functional mobility, and disability level. Study Design: A parallel-group, single-blinded randomized controlled trial. Methods: Eighty adults with KOA were randomly allocated to experimental (n=40) and control (n=40) groups. All participants underwent their usual physiotherapy care weekly for eight weeks. The experimental group received a structured HBE+EDU program to their usual care, while the control group performed home stretching exercises to equate treatment time. The Knee Injury and Osteoarthritis Outcome Score (KOOS) for the disability level, visual analogue scale (VAS) for pain, and timed up-and-go test (TUG) for mobility were measured pre-post intervention. Results: After eight weeks, the experimental group demonstrated significant improvements in the KOOS (all subscales), pain VAS, and TUG scores compared to baseline ( $P<0.001$ ); meanwhile, only KOOS (activities of daily living and sports subscales) was significant in the control group. Relative to the control, the experimental group presented higher improvements ( $P<0.001$ ) by 22.2%, 44.1%, and 15.7% for KOOS, pain VAS, and TUG, respectively. Conclusion: Integrating the HBE+EDU program into usual KOA rehabilitation could reduce pain and disability, while it improved functional mobility. The finding of this study suggests a combination of a structured HBE and EDU program to be considered as part of mainstream KOA management.