



Comparing the effects of Pilates exercise and home exercise on functional ability, knee joint range of motion and pain in women aged 50-65 years with knee osteoarthritis: a randomized controlled trial

Oral Presentation

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Abstract

Introduction: Musculoskeletal disorders, such as osteoarthritis, are closely associated with ageing, sedentary lifestyle, and physical inactivity (1) raise the economic burden of the family (2). Current evidence shows that an appropriate exercise program has become a safe, non-surgical, and cost-effective tool for the treatment of osteoarthritis (3,4). Therefore, the purpose of this study was to compare the effect of Pilates and home exercises on functional ability, knee joint range of motion, and pain in 50-65 years old women with knee osteoarthritis.

Methods: Using a single-blinded, parallel-group randomized controlled trial, 54 women, aged 50-65, with type two and three knee osteoarthritis, were randomly allocated to three exercise groups; Pilates, home exercises, and control group (n=18 per group). Participants were instructed to perform Pilates or home exercises at least three times per week, for eight weeks. Each training session lasted one hour. The control group did not receive an exercise prescription and continued their normal daily lives. The 30-second Chair Stand test, 6-minute Walk Test, Sitting and Rising Test, Four Step Square Test, and Timed Up and Go Test were used to assess functional abilities. Assessment of knee flexion and extension of knee joint and pain by goniometer and visual analogue scale (VAS), respectively.

Results: There was no significant difference between the effect of Pilates exercise and home exercise on functional abilities, knee joint range of motion, and pain level in 50–65-year-old women with knee osteoarthritis following 8 weeks of exercise program ($P \geq 0.05$). Both exercise groups showed significant improvements in above-mentioned outcome measures compared to the control group ($P \leq 0.05$).

Conclusion: This study showed that Pilates and home exercises have both beneficial effects on improving functional ability, knee joint range of motion, and reducing pain in middle age and older women with knee osteoarthritis.

Keywords

Home exercise; Functional Ability; Knee Osteoarthritis; Pilates; Pain; Range of motion

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