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## Title and Abstract

Title Applicability and Effectiveness of Strengthening and Balance Exercise program on the Quality of Life of Older Saudi Women with Bilateral Knee Osteoarthritis: A pilot study

Abstract

Osteoarthritis (OA) is the most common joint disease that causes pain, joint instability and muscle weakness, which can lead to physical function impairment and quality of life (QOL) reduction. However, designing a suitable training program for older Saudi women with knee OA considering several factors such as their cultural habits, physical activity levels and believe in exercise has become a big demand.

To evaluate the applicability of the proposed exercise program and its effect on the function and QOL of older Saudi women with Knee OA.

One group, repeated measure design was conducted. Ten Saudi female participants with bilateral knee OA (mild to moderate), aged 60-70 years have been recruited. The exercise program included gait reeducation, strengthening exercise by using theraband, sit to stand exercise and aerobic exercise (walking), two sessions per week as group therapy by trained therapist. SF-36 and Saudi Knee Function Scale SKFS were used pre and post four weeks of intervention to identify the changes.

Ten participants had clinical and statistical improvement in their QOL and function, SF-36 showed a significant improvement in all subscales related to QOL with  $p < 0.05$  except pain  $p = 0.705$ . While the disease specific measure SKFS reflected a significant improvement in function with  $p < 0.05$ . By comparing the two measurements, the SF-36 reflected more improvement in psychological state, 90% of the participants were improved, while SKFS reflected more improvement in pain and functional activities in all participants. Finally, the social activities were improved equally by the two scales by 70%.

**Group therapy is the key element of maximizing participants' adherence to the exercise. Moreover, the proposed program is applicable and effective and can be applied clinically to improve physical function and QOL of older Saudi women with knee OA.**

**Key words:** Elderly, balance ex's, strengthening ex's, QOL, knee OA.



# Certificate of Participation



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