



Lorestan University of Medical Sciences
Faculty of Khorramabad Nursing & Midwifery

A Thesis
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Degree of Master of Sciences
In Geriatrics Nursing

Title

**The effect of hydroalcoholic extract of olive leaf on osteoarthritis of
the knee and daily functioning of the elderly**

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Abstract

Introduction: Osteoarthritis is a joint disease, which progresses slowly, affects one or several joints, and causes restriction of joint movement, pain, and eventually disability. Various therapeutic and supportive measures are taken for this disease. This study aimed to examine the effect of hydroalcoholic extract of olive leaf on the pain and daily functioning of elderly patients suffering from knee osteoarthritis.

Method: In this controlled clinical trial, 100 patients aged 60-80 years suffering from osteoarthritis who met the inclusion criteria were enrolled according to the consecutive non-probabilistic sampling method. They were then assigned into three intervention group and one control group via block stratified randomization. The patients in the intervention groups, in addition to the routine treatment, also received topical ointment of olive leaf extract (group I), oral capsule of olive leaf extract (group II), and topical ointment plus oral capsule concurrently (group III) for eight weeks three times per day. The control group received no intervention by the researchers. In all groups, the daily functioning and joint stiffness were investigated using Western Ontario and McMaster Universities Arthritis Index, and the pain intensity was tested via VAS. Data were analyzed by SPSS 21, via one-way analysis of variance, repeated measure analysis of variance, Chi-Square, and GEE model.

Results: The findings showed that the changes in the mean score of pain were significantly greater in the intervention groups compared to the control ($p < 0.05$). The mean score of daily functioning in the four studied groups showed a significant difference over time ($p = 0.007$). With increase in each unit of time, the group receiving the ointment showed -1.19 units and the group taking oral capsule 0.89 units lower values, which were statistically significant ($p = 0.006$).

Conclusion: Consumption of olive leaf extract can be effective in improving the pain and daily functioning of patients suffering from knee osteoarthritis.

Keywords: olive leaf extract, senescence, geriatrics, knee osteoarthritis, alternative medicine, pain