

**The Effect of Aromatherapy on Preoperative Anxiety, Stress, and
Depression Symptoms, among Patients Undergoing Orthopedic Surgeries:
A Quasi-Experimental Study.**

By

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Abstract

Objectives: To determine the effectiveness of aromatherapy inhalation with Lavender Essential Oil on preoperative anxiety, stress, and depression symptoms among Jordanian patients undergoing orthopedic surgeries.

Methodology: A quasi-experimental design was employed in two hospitals in Jordan, with a sample size of 128 patients undergoing orthopedic surgeries. Participants were divided into an intervention group (n = 64) inhaling Lavender Essential Oil and a control group (n = 64) inhaling room air. Self-reported Depression Anxiety Stress Scale (DASS-21) was used to measure outcomes. Ethical approval was obtained, and written informed consent was secured from all participants. Data were collected using self-reported questionnaires pre-post-intervention and analyzed using SPSS version 26.

Results: Post-intervention, the intervention group showed significant reductions in anxiety (M = 3.59, SD = 0.93), stress (M = 4.46, SD = 0.85), and depression (M = 4.87, SD = 3.03)

compared to the control group (anxiety: $M = 17.64$, $SD = 3.98$; stress: $M = 15.42$, $SD = 0.77$; depression: $M = 13.76$, $SD = 3.22$), with p -values <0.05 for all comparisons.

Conclusion: Aromatherapy with Lavender Essential Oil effectively reduces anxiety, stress, and depression in patients undergoing orthopedic surgeries.

Recommendations: This intervention is recommended as a cost-effective, non-pharmacological option to improve psychological well-being in orthopedic patients. Further research should explore varying dosages and application techniques.

Keywords: Anxiety, Aromatherapy, Depression, Lavender Essential Oil, Orthopedics, Stress.