



Benefits of Aromatherapy Using Lavender Essential Oils for Pre-Operative Patients at Womack Army Medical Center

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Background

- Aromatherapy is currently reported as the sixth most commonly used complementary therapy after massage, music therapy, relaxation therapy, therapeutic touch and meditation.
- Anxiety prior to surgery could possibly hinder patients ability to process and comprehend instructions.
- Essential oils are a low risk, cost effective intervention that provides immediate results when inhaled.
- Aromatherapy, such as lavender essential oils, have been shown to relieve anxiety, fear, and pain perception, improve quality of sleep, decrease post-operative nausea and vomiting (PONV), reduce opioid requirements postoperatively, and reduce stress in the pre-operative patient for anxiety.

PICO Question

Among pre-operative patients of Womack Army Medical Center, will aromatherapy using lavender essential oils compared to the use of no aromatherapy decrease pre-operative anxiety?

Synthesis of the Literature

- 15 articles evaluated using the Army Nurse Corps Rating System for the Hierarchy of Evidence and the John Hopkins Nursing Quality of Evidence Appraisal Tool.
- 2 articles specifically addressed lavender use for pre-operative anxiety; the remainder used lavender pre-procedure for anxiety.
- 4 articles indicated that expectancy bias may have a role in influencing the effectiveness of aromatherapy.

Evidence Level	Number of Studies	Overall Quality
Level I: Evidence obtained from a systematic review, a meta-analysis of RCTs, or evidence based CPGs based on systematic reviews of RCTs	6	A
Level II: Evidence obtained from at least one well-designed RCT	2	A
Level III: Evidence obtained from well-designed controlled trials without randomization	2	B
Level IV: Evidence from well-designed case-control and cohort studies	4	B
Level V: Evidence from systematic reviews of descriptive and qualitative studies	1	B

Project Design

- The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care was the model used to implement.
- The team includes the project leader, a registered pharmacist, perioperative staff, product representatives and a mentor.
- Approximately 80 participants will be asked to participate and consented during pre-operative appointment.
- Each participant would be randomly assigned to either the lavender essential oil group or placebo group using baby oil.
- Day of Surgery
 - Pre-exposure to the Lavender essential oils or placebo using baby oil, the participant will be asked to complete a Hamilton Anxiety (HAM-A) survey, assessed using Visual Analogue Scale (VAS), and heart rate and blood pressure will be obtained.
 - A cotton ball containing 2 drops of lavender essential oils or placebo (baby oil) will be placed in a medicine cup and placed at patients bedside for 10 minutes.
 - Post exposure- A medicine cup containing the cotton ball of lavender essential oil or baby oil will be removed and the participant will be asked to complete another HAM-A survey, assessed using VAS and heart rate and blood pressure obtained.
 - Project champion will thank participant and offer free sample of essential oil.



Results

Results pending

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Nursing Implications

- While there is sufficient evidence regarding the use of essential oils, currently it is not used as a complementary intervention, specifically within the Department of Defense (DoD) population and medical treatment facilities (MTF).
- Assessing therapeutic outcomes, with the use of essential oils versus the current use of pharmacological means may be beneficial to reduce anxiety in pre-operative patients at Womack Army Medical Center.

Implications and Future Research

- The military relevance for this project contributes to generalizable knowledge that when patients are more relaxed and anxiety levels are reduced they are better able to comprehend instructions about the surgical procedure and postoperative directions for rehabilitation.
- Medications currently prescribed to reduce anxiety are anxiolytics, barbiturates, and other sedatives administered either orally or intravenously.
- Offering complementary intervention options for patients, without compromising standards of care, has the potential to promote a sense of calmness, optimize the patient experience pre-operatively.



References

Available on Request
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