

## **Examining the Effects of Inhaling a Blend of Sweet Marjoram and Bergamot on Pain and Anxiety Levels During Peripheral IV Insertion in Preop Adult Patients**

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**Introduction:** Aromatherapy has been studied as a simple nursing intervention to reduce pain and anxiety in many patient populations. While research regarding aromatherapy is increasing, there are few studies looking at using aromatherapy in the perioperative setting.

**Identification of the problem:** Pain and anxiety during the perioperative experience are common patient concerns. Few nursing interventions exist to reduce both pain and anxiety in patients during PIV insertion. For example, nurses may use lidocaine to alleviate pain with insertion, but this will not reduce anxiety. Preoperative anxiety can lead to increased intraop anesthesia needs, postop complications, and prolonged recovery times.

**Purpose of the Study:** The purpose of this study was to determine if inhalation of a blend of the essential oils of Sweet Marjoram and Bergamot decreased pain and/or anxiety at the time of insertion of a peripheral IV (PIV) in pre-surgical adult patients.

**Methodology:** Adult patients who had a PIV inserted by an RN preoperatively were enrolled in the study. 59 patients were randomized to receive inhalation aromatherapy or placebo. Patients' pain and anxiety scores were measured pre, during, and ten minutes after peripheral IV insertion. Overall satisfaction level with the IV start process was also measured.

**Results:** The intervention (aromatherapy) group had a mean pain level reduction of 1.58 (15.8%), and the control (placebo) group a mean pain reduction of 0.23 (2.3%) using the 0-10 VAS. The intervention group had a mean anxiety reduction of 14.2 (14.2%) using the 0-100 VAS, and the control group a mean anxiety reduction of 8.9 (8.9%) using the 0-100 VAS. There was no statistical difference between the groups regarding satisfaction levels.

**Discussion:** As our study's sample size was small more research with a larger patient population is needed to determine if results are translatable to a larger more diverse population.

**Conclusion:** In this study we found that inhaling a blend of Sweet Marjoram and Bergamot essential oils can decrease pain and anxiety with PIV insertion.

**Implications for perianesthesia nurses and future research:** Aromatherapy is an inexpensive integrative therapy that may be beneficial for many patients to optimize patient care. Additional aromatherapy research is needed in the perioperative setting to provide optimal patient centered care.