PSVMC Nursing Reducing Anxiety With the Use of Aromatherapy Essential Oil Blends in Patients Awaiting Pre-scheduled Cesarean Section

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Recommended Citation
Engstrom, Amy; De La O Cabanas, Erin; and Donato, Minerva Joanne, "PSVMC Nursing Reducing Anxiety With the Use of Aromatherapy Essential Oil Blends in Patients Awaiting Pre-scheduled Cesarean Section" (2019). All Nursing Boot Camp Posters. 11.
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Background
Anxiety is commonly seen in preoperative scheduled cesarean section patients. Nearly all patients report at least some mild anxiety upon arrival, which may increase as the surgery nears. Anxiety can have adverse effects on patients such as increase in blood pressure, difficulty sleeping, slower recovery times and difficulties with breastfeeding and/or bonding with a newborn infant (Dubber, 2014). Anxiety can result in increased hospital cost and nurses’ workload. (Meghani, Tracy, Hadidi, & Lindquist, 2017).

Aromatherapy has been shown to reduce anxiety. Other preoperative populations have been studied, and proven aromatherapy to be useful. The use of essential oils, including lavender, sandalwood, orange, peppermint or a combination of all of them has been reported to reduce anxiety in women undergoing breast biopsies (Trambert, Kowalski, Wu, Mehta, & Friedman, 2017).

The lack of studies related to preoperative scheduled cesarean section patients reveals a need for more research. The benefits of aromatherapy can include the relief of physical symptoms, relaxation, and reduction in fatigue. The ease of use, low cost, and lack of adverse side effects give the bedside nurse and hospital another tool to ease patient’s way and achieve a better patient experience.

Purpose
The purpose of this lavender aromatherapy study is to apply the same methods used in other preoperative populations to preoperative scheduled cesarean section patients to determine if inhalation of lavender essential oils will reduce reported anxiety.

PICOT: Does aromatherapy using essential oil of lavender decrease anxiety in scheduled cesarean section patients?

Methods
This Institutional Review Board (IRB) approved study used a quasi-experimental design with pre- and post-test control group. Participants were randomized into aromatherapy or standard nursing intervention control groups.

The population included English speaking women, ages 28 through 40, who were scheduled for a cesarean section. The patients were approached at check-in, invited to be a part of the study, and asked to fill out a questionnaire to determine their age, which number pregnancy this was for them, and how many prior cesarean sections they had experienced. To determine demographic variables in the patient population, questions were also asked about adequate support at home, attendance at prenatal classes, highest level of education, prior use of aromatherapy for anxiety, and history of anxiety/panic disorder or other psychiatric disorder.

Vital signs were assessed and patients were asked to rate their anxiety level using a visual analog scale (VAS) at arrival, about 45 minutes later, and about 10 minutes prior to surgery. Patients in the treatment group were given the aromatherapy via a bracelet that contained the lavender essential oil and instructed to inhale the essential oils for 30 seconds every 3-5 minutes or when they felt anxious.

Results
A total of 13 patients were invited to participate; of these 11 (85%) consented with 7 (64%) randomly assigned to aromatherapy, and 4 (36%) to the control group. As Figure 2 demonstrates, the average self-reported anxiety level of patients awaiting cesarean section procedures, expected to increase with approaching surgery as demonstrated by the control group, instead maintained or decreased for patients benefiting from aromatherapy intervention.

As Figure 3 illustrates, six out of seven (86%) patients receiving aromatherapy maintained or decreased in reported anxiety, compared with 33% of patients in the control group. With a Chi-squared statistic of 2.744, the resulting p-value of 0.098 trends towards significance, but the result based on this small sample size is not significant at $p < 0.05.$

Discussion/Conclusions
The results of the limited subjects in the study do accurately reflect the potential of the intervention. Aromatherapy has promise for reducing anxiety in patients awaiting scheduled cesarean sections.

Challenges to the study included the difficulties recruiting study participants, making data challenging to compile. The low volume of cesarean procedures and unpredictability of surgery schedules due to earlier deliveries or re-scheduling of procedures, restricted study recruitment. An unexpected limitation included multiple caregivers on the unit with severe allergies to lavender, preventing enrollment of patients while these caregivers were present.

To further examine the incorporation of aromatherapy into standard nursing practice for anxiety reduction, the study could be repeated over a longer period of time. Including additional principal investigators to ensure additional recruitment of patients, or incorporating other patient populations with more predictable surgical schedules could expand the possibilities for research.

Patients are increasingly accepting of non-pharmacological treatments such as aromatherapy, often bringing in their own essential oils for anxiety relief and self-care.

Given the adverse effects of preoperative anxiety and the simplicity of aromatherapy, healthcare providers should consider the use of preoperative lavender aromatherapy to decrease anxiety in the scheduled cesarean section population and in other settings where short preoperative waiting times necessitate a convenient method of anxiety reduction.

References