Introduction

The purpose of the study was to investigate the use of the essential oil derived from the herb, lavender, in nulliparous, singleton, full-term laboring women, at least 18 years old, whose babies were vertex presentations. Labor pain is considered one of the most intense forms of pain, and anticipatory anxiety that often accompanies labor is often correlated to severe spasm of the pelvic floor and the perineal musculature. A cycle of anxiety – severe spasm – pain, has the potential to raise levels of the hormone epinephrine, which then greatly intensifies the pain experience and may even prolong the first stage of labor. The essential oil, lavender as aromatherapy has been demonstrated to alleviate pain, relax smooth muscles and induces a calming effect by decreasing cortisol levels. Aromatherapy is an inexpensive non-pharmacologic intervention that has been studied and documented to intensify the pain experience and may even prolong the first stage of labor thereby increasing the risk of an operative delivery.

Problem / PICOT

QUESTION: Will the use of aromatherapy decrease anxiety over the fear of pain of labor and delay request for pharmacologic intervention?

PROBLEM: Increased anxiety in the primiparous results in early pharmacologic intervention which has the potential to increase pain, prolong the first stage of labor thereby increasing the risk of an operative delivery.

PICOT* Question
P: How do women 18+ years old; who have not had children before, term, vertex and <4 cm. dilated, presenting to the CMC Mother Baby Center for labor management, O: Report experiences of pain and anxiety, when the essential oil, lavender, is affixed to their patient gown
T: During the first stage of labor
* Not a Controlled study

Methodology

This correlational descriptive study enrolled 44 nulliparous women admitted to Mother Baby Center who were less than 4 cm. dilated, full term, vertex presentation and in the latent phase of labor. Once informed consent was obtained, Spielberg’s State Trait Anxiety Scale Form Y-6 (Marteau & Bekker, 1992) and Wong-Baker Faces Pain Rating Scale (Stuppy, 1998) were administered prior to, and 15-minutes following, the placement of a lavender swatch to the patient’s gown. Demographic information was collected: age, race/ethnicity, education, presence/absence of child birth education, and perceived pain threshold. Data extracted from the patients’ medical records included: time of cervical dilation, use of, and time of, any pharmacological intervention, duration of labor and mode of delivery.

Results

There was a significant difference in the scores for Anxiety Pre Lavender (M=16.91, SD=3.91) and Anxiety Post Lavender (M=14.20, SD=4.24) conditions; t(33)=3.93, p = .000.

Discussion

The results supported prior studies of the effectiveness of aromatherapy, as described in the literature (Tillett & Ames, 2010; Lamadah & Nomani, 2016). Lavender’s effects have been described (Koulivand, Ghadiri and Gorji, 2013) as soothing to actually reducing pain and anxiety levels. In this study, the standardized use of the essential oil, lavender was shown to be effective in reducing the patient’s self-reported experiences of pain and anxiety, when used during the early stages of active labor in women who were full-term, primiparous, singleton, vertex presentation. Interestingly, the study participants were well educated (78% post-high school, with 4.5% and 15.9% holding doctoral and graduate degrees, respectively), though a majority, 59%, did not attend any formal (classroom, as offered by CMC or others) child birth preparation, itself a potential confounding variable and to consider in future research of laboring women.

Outcomes

Implications for future research include double-blind, randomized trials in order to meet the requirements for study generalizability, a limitation. The study population may also be expanded to include multiparous, other than singleton births, those with pre-existing diagnoses such as anxiety, and in other patient populations with selected medical conditions throughout the organization and in the system. Since the majority of study participants did not attend child birth classes, an implication of the study is to increase knowledge through increasing opportunities to attend the classes at more convenient times, or by providing the content via alternative means (Skype, webinars, etc.).

References