

Lavender aromatherapy helpful for management of anxiety in postpartum cesarean section

Dwi Susanti, Dwi Yati

Department of Maternity Nursing, Faculty of Health, Jenderal Achmad Yani University, Yogyakarta, Indonesia

Correspondence to: Dwi Yati, E-mail: dwie.ns215@gmail.com

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ABSTRACT

Background: Cesarean section (CS) is a labor process that can have various impacts; physically it will cause pain in the abdomen and psychologically will have an impact on fear and anxiety. Continued anxiety can lead to stress, postpartum blues, and even psychosis. **Objective:** This study aims to determine the effect of lavender aroma therapy on anxiety levels in postpartum CS mothers at Panembahan Senopati Bantul Hospital, Yogyakarta. **Materials and Methods:** This research is a quantitative study using a quasi-experimental design with a pre-test and post-test approach non-equivalent control group design which was conducted in August 2020–October 2020. The population of this study were all postpartum women with CS who were treated in the Alamanda 3 ward at Panembahan Senopati Hospital, Bantul, with an average of 56 patients per month. The sample in this study was 30 respondents with postpartum CS, taken by consecutive sampling technique. Data collection tools were the Zung Self Rating Anxiety Scale questionnaire and interviews statistical test using Wilcoxon. **Results:** Most of the postpartum mothers with CS had anxiety in the mild category as many as 19 people (63.3%) and moderate as many as 11 people (36.7%). After giving lavender aromatherapy, the level of mild anxiety was 30 people (100%). There is a difference in the average level of postpartum maternal anxiety CS before and after giving lavender aromatherapy with the mean value before aromatherapy is 41.36 and after aromatherapy is 28.26, with a P -value of 0.000 ($P < 0.05$). **Conclusions:** There is an effect before and after giving lavender aromatherapy to postpartum anxiety in CS in Alamanda 3 RSUD Panembahan Senopati Bantul.


KEY WORDS: Aromatherapy; Lavender; Mother; Postpartum; Cesarean Section; Anxiety

INTRODUCTION

Cesarean section (CS) is a surgical procedure that is currently commonly performed during childbirth. The number of deliveries using the CS method is increasing globally. The number of CS deliveries worldwide in 2014 was 18.6% of the total births, and in Asia it was 19.2%.^[1] In Indonesia, the percentage of scheduled castes (SC) deliveries has increased by 7% over the

past 5 years. Based on the 2017 Indonesian Demographic Health Survey report, the number of CS deliveries was 17% of live births and 7% were elective SC. The highest percentage of CS surgery deliveries occurred in women aged 35–49 years (22%), primiparous (19%), women who live in urban areas (23%), women with higher education and are in the top wealth quintile as much as 32%. The percentage of the number of deliveries in DIY was 23, 4% of the total number of deliveries.^[2]

CS can have a negative impact, namely physically causing pain in the surgical area and psychologically in the form of fear and anxiety if the analgesics are lost, the pain will be even more pronounced. Apart from fear, another negative impact is related to the self-concept of the mother. The mother will lose the normal experience of giving birth and can disrupt body image as a result of the surgery.^[3]

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Anxiety is a vague feeling of discomfort or worry accompanied by an autonomous response (the source is often not specific or unknown to the individual), a feeling of fear caused by the anticipation of danger.^[4] Each individual has a different response to anxiety. Physiological responses to anxiety include palpitations, rapid breathing, gasping for breath, abdominal discomfort, abdominal pain, nausea, insomnia, frequent urination, pale face, and sweating all over the body. Behavioral and cognitive responses include restlessness, lack of coordination, impaired attention, poor concentration, nightmares, tension, nervousness, fear, and feelings of guilt.^[5] This anxiety response can also occur in post-SC surgery mothers. This response can worsen the condition of the postoperative mother with CS, such as increasing pain and hindering the healing process.^[6] Anxiety in postpartum mothers can also increase the production of the hormone cortisol which can make the patient stressed. Stress that occurs in postpartum mothers can inhibit the production of breast milk (ASI). Postpartum mothers who experience anxiety and stress are at risk of experiencing failure in breastfeeding in the 1st week postpartum. The results also indicated that the type of delivery would influence the practice of breastfeeding after the baby was born.^[6,7]

Management of anxiety in postpartum SC mothers can be done by providing non-pharmacological therapy. Non-pharmacological therapies that can be given include acupuncture, biofeedback, hypnosis, cutaneous stimulation, distraction, transcutaneous electrical nerve therapy (Transcutaneous Electrical Nerve Stimulation), relaxation (progressive relaxation, autogenic relaxation, deep breathing, meditation, yoga, zen, and aromatherapy).^[8]

Anxiety management can be done through relaxation, one of which is aromatherapy. The easiest to use aromatherapy, the simplest is to use the inhalation method. Aromatherapy can reduce anxiety because aromatherapy uses a physiological process that stimulates sensory effects and receptors in the nasal bones which then provide information to the brain that can control emotions, memories, and provide information to the hypothalamus.^[9-11]

Lavender aromatherapy has been widely used to reduce anxiety in patients before childbirth. The results showed the effectiveness of lavender aromatherapy to reduce anxiety in third trimester pregnant women by 1.52.^[12] Another similar study states that lavender aromatherapy can reduce the level of anxiety in pregnant women who will face labor from mild to non-existent levels.^[13] Based on research conducted by researchers, there has never been a study on the effect of lavender aromatherapy to reduce anxiety in post-cesarean section surgery patients.

MATERIALS AND METHODES

This research is a quantitative study using a quasi-experimental design with pre-test and post-test approaches

nonequivalent control group design which was conducted in August 2020–October 2020. The population of this study were all postpartum women with CS who were treated in the Alamanda 3 ward at Panembahan Senopati Hospital, Bantul, Yogyakarta, with an average of 56 patients per month. The sample in this study was 30 respondents with postpartum CS, taken by consecutive sampling technique. The inclusion criteria in this study were postpartum mothers with cesarean section 24 h, not under sedation, willing to be respondents. While the exclusion criteria in this study were no hearing loss, visual impairment, speech, and olfactory disorders such as colds, no comorbidities such as heart disease, asthma, and hypertension percutaneous endovascular biopsy (PEB). Data collection tools were the Zung Self Rating Anxiety Scale questionnaire and interviews^[13-15] statistical test using Wilcoxon. This research is licensed by the ethics commission of Universitas Jenderal Achmad Yani Yogyakarta with a number. Skep/080/KEPK/VIII/2020.

RESULTS

In this study, we examined effects of lavender aromatherapy on anxiety in postpartum section cesarean. Symptoms of anxiety were assessed and compared before and after given lavender aromatherapy intervention. Mean anxiety score before given lavender aromatherapy was 41.36. This decreased to 28.26 after given lavender aromatherapy intervention. There is a significant decrease in the level of anxiety of postpartum section cesarean after the intervention of lavender aromatherapy where $P < 0.001$ [Table 1].

DISCUSSION

Hypothesis testing in this study using the *t*-test shows that there is a difference in the mean level of anxiety of postpartum section cesarean mothers before and after giving lavender aromatherapy with the mean value before aromatherapy is 41.36 and after aromatherapy is 28.26, with a *P*-value of 0.000 ($P < 0.05$) it can be seen that giving lavender aromatherapy affects the anxiety level of postpartum section cesarean mothers before and after being given lavender aromatherapy.

In 2016, research conducted by Kianpour *et al.* showed that lavender aromatherapy can reduce stress, anxiety, and depression in postpartum mothers. The results of these studies are the same as the research above. The results of this study indicate that lavender aromatherapy can reduce anxiety in postpartum SC mothers. In this study, aromatherapy was

Table 1: Mean and standard deviation of anxiety before and after interventions

Variables	Mean	Standard deviation	<i>P</i> -value
Before Intervention	41.36	6.70	0.000
After Intervention	28.26	3.56	

given after 24 h after SC surgery, given every 12 h and repeated for 2–3 days while the patient was hospitalized, whereas in the study of Kianpour *et al.*, aromatherapy was given every 8 h and given for 4 weeks. The similarity of this study with the study of Kianpour *et al.* is that the therapy given is lavender aromatherapy with an inhalation technique, the patient is given three drops of lavender aromatherapy gauze then the patient is asked to inhale.^[16]

Lavender has the main ingredient, namely, linalool. Linalool is the main active ingredient which acts as anti-anxiety or relaxation. Linalool has the effect of increasing alpha waves in the brain and these waves help us to relax and inhibit the prostanooid system which is involved in the production of PGE2.^[11] Aromatherapy that is given by inhaling will enter the limbic system where the aroma will be processed so that we can smell it. When you inhale the aroma, the chemical components will enter the olfactory lobe and then proceed to the limbic system in the brain. The limbic system is the inner part of the brain that functions as a center for pain, pleasure, anger, fear, depression, and other emotions. The limbic system receives information from various systems such as information from the auditory system, sight, smell, besides that the limbic system can also control and regulate body temperature, heart rate, respiration, and also thirst and hunger.^[13]

Limitation of the Study

A limitation in this study is the relatively low number of samples in the absence of a control group. However, we were able to collect sufficient data so that the results for statistical analysis were sufficient.

CONCLUSIONS

The results of this study can significantly reduce anxiety. Lavender aroma therapy can be the right choice to provide nursing care to postpartum section cesarean women with anxiety problems.

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