

Lavender Aromatherapy on Post-Partum Anxiety

Siti Dewi Sulastri¹, Shinta Novelia², Tommy J Wowor³

^{1,2}*Midwifery Department, Faculty of Health Sciences Universitas Nasional*

³*Nursing Department, Faculty of Health Sciences Universitas Nasional*

* *Corresponding Author: Shinta Novelia, Faculty of Health Sciences Universitas*

Nasional; shinta.novelia@civitas.unas.ac.id

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Abstract

Background: Anxiety that is not immediately treated will result in postpartum depression, postpartum blues or baby blues. The safest treatment of anxiety is to use non-pharmacological methods; one of which is lavender aromatherapy.

Objective: The research aims to determine the effect of lavender aromatherapy on the anxiety of post-partum women at BPM Elis Nurhayati (Independent Midwife Clinic) Depok in 2018.

Methods: The study used Quasi-Experiment with nonequivalent control group and pre-post test design. The research involved two groups, the experimental group and the control group. Data were collected using Hamilton Rating Scale for Anxiety questionnaire (HRS-A). Data analysis was carried out using independent and paired simple t-test.

Results: Statistical result shows that P value was 0.000, it means that there was an influence of lavender aromatherapy in decreasing anxiety among post-partum women.

Conclusions and Suggestions: Medical officers need to optimize treatment to reduce the level of post-partum anxiety by giving lavender aromatherapy for 15-30 minutes. Lavender aromatherapy is suggested to use to reduce postpartum anxiety.

Keywords: lavender, aromatherapy, post-partum, anxiety.

Introduction

Pregnancy and birth are both happy physiological phenomena, but changes in pregnant women's mood might make them too sensitive to psychological stimuli, leading to mental difficulties¹. The postpartum phase (puerperium) begins with the birth of the placenta and ends with the birth of the baby. The womb usually returns to its pre-

pregnancy state after 6 weeks. A postpartum time exists. Psychology, physiology, and social adaptations are examples of adaptations. After giving birth, women lose control of the events, feel helpless, and experience disorientation, as well as symptoms of despair, anxiety, and posttraumatic stress disorder². However, not all postpartum women can handle this effectively, which might lead to psychological issues. Anxiety is one of the psychological disorders that might arise

Post delivery anxiety influences 5-20% of moms experience postpartum anxiety⁴. In the end, postpartum depression (with a varying prevalence of 5-40% in different countries) accounts for 12.5% of women's hospitalizations for psychiatric issues Postpartum depression is one of the most serious effects of postpartum stress, making women and newborns more vulnerable⁵. A Japanese study found that postpartum anxiety and sadness resulted in poorer self-confidence and, as a result, decreased breast feeding⁶. Although minor anxiety might inspire people to take responsibility for their actions or to learn how to change their lifestyle and habits, extreme anxiety can be quite disabling. Anxiety that is as severe as a panic disorder might lead to impairment. Postpartum depression can have a detrimental impact on a mother's function and, in certain situations, decrease maternal interest in her child and family members. Because birth is regarded as a happy occurrence, moms' mental anguish might be perplexing for family members. It also has a bad impact on their sexual desire and, as a result, their marital relationship. Postpartum depression is a serious health issue that interferes with a healthy mother-infant bond.

Anxiety treatment can be done using pharmacological and non-pharmacological methods. In pharmacology, anti-anxiety drugs are used, especially benzodiazepines, which are used for the short term, not long term because this treatment is tolerant and dependent. For non-pharmacology, these include relaxation training, psychotherapy, especially psychodynamics with hypnosis or hypnotherapy and aromatherapy⁷

"Aromatherapy," as it is known, is "the science of using highly concentrated essential oils or essences distilled from plants in order to utilize their therapeutic properties⁸. The oils can be rubbed into the skin or inhaled through the use of a steam infusion. Aromatherapy is most commonly used during labor by massage, bathing, or inhalation. Aromatherapy frequently use lavender oil. Lavender essential oil is a fantastic multi-purpose essential oil⁹. Because of its analgesic characteristics, it can be

used to relieve pain in a variety of conditions such as dressing changes, palliative care, reducing labor pain, and chronic pain. Lavender's linalyl acetate component can calm smooth muscles. Lavender essential oil provides a relaxing effect as well. Inhaling lavender scent reduces cortisol output from the adrenal gland and induces calm by decreasing sympathetic activity and promoting the parasympathetic nervous system.

There are no studies or published evidences that show essential oils are harmful to the mother or the fetus. Thus, this study aimed to identify the effect of lavender aromatherapy on anxiety among post-partum women in BPM Elis Nurhayati Kotamadya Depok in 2018.

Method

Method should be structured as follows:

1. *Research design*

The design of this study is a quasy experimental design with control group.

2. *Setting and samples*

The population of this study was all post-partum women who were in BPM Midwife Elis Nurhayati, Amd. Keb during the study period (January to June, 2018) which consisted of 60 women. A total of 20 women were recruited as the sample by accidental sampling technique. They were divided into 10 women for the experimental group, dan 10 women for the control group.

3. *Intervention (applies to experimental studies)*

Lavender aromatherapy and routine post-partum care were applied into experimental group. While the control group only received routine care. The women in the experimental group were advised to use lavender aromatherapy for 15-30 minutes. Tools and materials were used for intervention including lavender essential oil and diffuser.

4. *Measurement and data collection*

The Hamilton Anxiety Rating scale was used to analyze anxiety levels. The anxiety was measured before and after intervention in both experiment and control group.

5. *Data analysis;*

Data were analyzed by univariate and bivariate analysis. The normality test was

performed to choose the appropriate statistic.

Results

Table 1

The Anxiety Levels Before and After Intervention in The Experiment and Control Group

	Anxiety Levels	Control Group		Anxiety levels	Experiment group	
		f	%		f	%
1.	Not present	0	0	Not present	3	30
2.	Mild	4	40	Mild	6	60
3.	Moderate	3	30	Moderate	1	10
4.	Severe	3	30	Severe	0	0
5.	Very severe	0	0	Very severe	0	0
	Total	10	100		10	100

Table 2 shows that majority of respondents experienced mild anxiety in the control group (40%) and majority of respondents experienced mild anxiety (60%). In addition, 30% respondents did experience anxiety in the experiment group.

Table 2

The differences of Anxiety Levels after intervention between Experiment and Control Group

NO.		Mean	SD	SE	t	P Value	N
1.	Exp group	23.2	6,763	2,139	3,106	0,006	10
2.	Control group	15.2	4,541	1,436			10

Based on table 2 it can be concluded that the mean of anxiety score in the experiment group is 23.2 while in the control group is 15.2. The independent t test shows that there is a significant difference of anxiety after intervention between intervention and control group with (p value = .006).

Table 3

The differences of Anxiety Levels Before and After Intervention within Experimental Group

NO.		Mean	SD	SE	t	P Value	N
1.	Pret Test	24,90	24,90	2,139	3,106	0,006	10
2.	Post Test	15.2	6,740	1,436			10

Based on table 3 it can be concluded that the mean of anxiety score in pre-test is 24.9 and in post-test is 15.2. The paired t test shows that there is a significant difference of anxiety before and after intervention (p value = .006).

Discussion

The research results showed that the level of anxiety based on the results of

the experimental group research showed that the frequency distribution of anxiety levels after being given lavender aromatherapy was at a mild level of anxiety. Depression after delivery is post-partum blues or baby blues, a mood transition period after giving birth which often occurs in 50%-70% of women¹⁰. Non-pharmacological therapy is an additional therapy apart from just taking medication, one of the non-pharmacological therapies is aromatherapy. Aromatherapy is a treatment technique using the aroma of essential oils from the distillation process of various parts of plants, flowers and trees, each of which contains different therapeutic properties. The results of the study showed that there was a significant difference in the average anxiety of respondents between those who were not given lavender aromatherapy and patients who were given lavender aromatherapy. If anxiety is not treated immediately, it can cause post-partum depression or baby blues.

Anxiety can cause various problems, including post-partum depression in mothers, where the mother's psychological state is disturbed. According to Fatmawati's research (2016)¹¹, anxiety can cause physical and psychological changes characterized by increased heart rate, increased blood pressure, increased breathing frequency and generally reduces energy levels in the client, so that it can be detrimental to the individual himself. One relaxation technique that can be used to reduce anxiety is progressive muscle relaxation and giving aromatherapy. Progressive relaxation is a relaxation technique that uses the technique of tightening and relaxing the muscles in certain parts of the body so that a feeling of physical relaxation arises.

Apart from using progressive muscle relaxation techniques, anxiety can be reduced by administering aromatherapy. Aromatherapy used for individuals who experience anxiety is lavender aromatherapy. Lavender oil has a lot of potential because it has several ingredients such as monoterpene hydrocarbons, camphene, limonene, lavandulol graniol, nerol and most of it contains linalool and linalool acetate with an amount of around 30-60% of the total amount of oil, where linalool is the main active ingredient as a relaxant to reduce anxiety¹². The effectiveness of lavender aromatherapy on anxiety levels occurs because lavender aromatherapy which contains the main active ingredients linalool and linalool acetate has a positive impact on reducing anxiety levels if given directly by inhalation (inhalation). The mechanism through smell has a faster effect than other routes. In dealing with emotional problems such as stress and anxiety,

including headaches, the nose or smell have direct contact with the parts of the brain whose job is to stimulate the formation of effects caused by aromatherapy.

The results of this study are in accordance with research conducted by (Fatmawati, 2016)¹¹, namely regarding the effect of progressive relaxation and lavender aromatherapy on reducing anxiety levels in preoperative patients with spinal anesthesia. This research concludes that giving lavender aromatherapy can reduce anxiety levels. In the researcher's opinion, the similarity of this research is the intervention used, namely the administration of lavender aromatherapy by inhalation.

The results of the study showed that there was a significant difference between before giving lavender aromatherapy and after giving lavender aromatherapy. Aromatherapy is a treatment technique using the aroma of essential oils from the distillation process of various parts of plants, flowers and trees, each of which contains different therapeutic properties. Essential oil from lavender flowers (*lavandula angustifolia*) provides a sedative effect because it contains the active ingredient, namely linalool (C₁₀H₁₈O). Lavender flower aromatherapy (*lavandula angustifolia*) contains linalool which functions as a sedative effect so that when someone inhales lavender flower aromatherapy, the aroma released will stimulate the olfactory nerve cilia receptors located in the olfactory epithelium to transmit the aroma into the olfactory bulb via the olfactory nerve. The olfactory bulb is connected to the limbic nerve. The limbic system receives all information from the auditory system, vision system, and olfactory system. So far there are no contraindications and does not cause sensitization and irritation when used on the skin and does not irritate the mucosa so lavender (*lavandula angustifolia*) flower aromatherapy is very safe¹³.

In the Soedirman nursing journal (the Soedirman journal of nursing) according to research¹⁴. Aromatherapy is a complementary therapy in nursing practice and uses essential oils from the fragrant smell of plants to reduce health problems and improve the quality of life. Smells have a direct effect on the brain like analgesics¹⁴. For example, smelling lavender will increase alpha waves in the brain and help you feel relaxed. This research is in accordance with research in the Soedirman nursing journal (the Soedirman journal of nursing) regarding the effect of lavender aromatherapy on pain intensity in post-operative patients¹⁵. In the opinion of researchers, the technique of administering lavender aromatherapy is very safe to give to patients who experience

anxiety and experience pain, because the main content of lavender has a relaxing effect and is easy to administer by inhaling so it is very effective in dealing with this.

Limitation

The intervention of providing lavender aromatherapy was given in one session of around 15-30 minutes to post-partum women for 2 hours, due to limited time and sources. The room size is around 2x10 square meters, so the distance between the lavender aromatherapy being used must be around 60 cm from the patient and adjusted to the patient's wishes. Researchers could not limit the situation to the postpartum care room because it was next to the delivery room so the sounds of other patients who were in labor could still be heard.

Conclusion

This study concluded that majority of respondents experienced mild anxiety in the control group (40%) and majority of respondents experienced mild anxiety (60%). In addition, 30% respondents did experience anxiety in the experiment group. There is a significant difference of anxiety after intervention between intervention and control group with (p value = .006). There is a significant difference of anxiety before and after intervention (p value = .006). Thus, the lavender aromatherapy is effective to reduce anxiety among post-partum women. Future study are required to use the large sample size and control the environment where the intervention applied.

Ethical Considerations

This study has gained approval from the Universitas Nasional and the TPMB

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Conflict of Interest

There is no conflict of interest in conducting this study.

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