



The Effectiveness of Lavender Aromatherapy on Perineal Suture Pain among Postpartum Women

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ABSTRACT

It is estimated that perineal tears occur in as many as 57% of women who are in normal labor. Pain associated with perineal sutures is experienced by ninety percent of mothers in Indonesia due to perineal tears. When a mother experiences pain from a perineal suture when walking (33%), sitting (39%), or sleeping (45%), it interferes with her ability to move around, which might lead to difficulties being experienced. In accordance with the findings of Widayani's research, the discomfort that postpartum women experience in the form of perineal suture pain can be alleviated by the utilization of non-pharmacological methods, one of which is the provision of aromatherapy. This quasi-experimental study utilized a design consisting of a pre-test and a post-test for a single group. A total of fifteen respondents were chosen through the process of purposive sampling to make up the specimen. The study instrument was utilized with the use of a perineal pain score observation sheet. The Mann-Whitney test and the Paired Samples T-Test were utilized in the data analysis. There is a significant difference in the level of discomfort experienced by postpartum women who have undergone perineal suture procedures before and after receiving lavender aromatherapy ($p = 0.011$). It has been demonstrated that aromatherapy with lavender can alleviate the severity of discomfort associated with perineal sutures in women who have recently given birth. Health professionals, particularly midwives, are anticipated to implement complementary midwifery care by administering lavender aromatherapy as a non-pharmacological approach to alleviate the severity of pain associated with perineal sutures

INTRODUCTION

According to Andarmoyo (2013), the puerperium is a period during which mothers are susceptible and undergo a number of adaptation processes. One such process is the healing of perineal wounds. Spontaneous laceration is another potential cause of perineal lesions in addition to episiotomy. For certain individuals, pain may be more distressing than other conditions. Perineal pain is a usual symptom that occurs in postpartum women; nonetheless, it can hinder a woman's ability to move around and lead to complications such as postpartum hemorrhage. Perineal pain caused by tearing can lead to feelings of exhaustion and discomfort during sexual activity (Kurniawati, 2019; Mayangsari & Sari, 2021).

Perineal pain may be more uncomfortable for certain individuals than the problems that are caused by other diseases. Following vaginal delivery, women frequently report experiencing pain and trauma to the perineum. According to Indrayani (2016) and Jacob (2014), it was stated that a woman's capacity to move has the potential to be hindered by perineal pain, which can also result in trauma-related issues such as perineal tears, which can lead to discomfort and dyspareunia. Research that was carried out by East at Royal Victoria Hospital in Australia in the year 2010 revealed that ninety percent of women who had recently given birth experienced discomfort in the perineal region. Additionally, thirty-three percent of women reported experiencing pain when walking, thirty-nine percent when sitting, and forty-five percent when lying down (East et al., 2012).

The findings of a study conducted by Widayani (2017) indicate that the application of lavender aromatherapy has the potential to lessen the severity of perineal pain experienced by postpartum mothers ($p=0.001$). The use of lavender aromatherapy was shown to lessen perineal discomfort in sixty percent of postpartum women who experienced spontaneous tearing or episiotomy, and forty percent of these women did not experience any pain at all. This was demonstrated in the research conducted by Vakillian. According to Dale and Cornwell's findings, the amount of perineal pain experienced by 635 postpartum mothers who were washed with lavender oil was significantly reduced. In the meantime, the Indonesian Nursing Diagnosis Standard (SDKI) reported that in 2016, 57% of mothers had perineal injuries. Of these injuries, 28% were caused by episiotomy, and spontaneous tears caused 29%.

During the year 2016, the Indonesia Ministry of Health reported that 52% of mothers had experienced perinatal damage because of the delivery of an approximately severe baby. Ilham (2022) and Pratiwi (2020) conducted a study that showed that essential lavender therapy had beneficial benefits on the management of anxiety and pain in individuals who suffered from sleep deprivation. There were 65 mothers who gave birth normally, 49 (or 75% of the total) who had perineal rupture, and 15 (or 25% of the total) who did not. Of the 49 women who had perineal injury, 44 reported moderate pain, and 5 reported mild pain, according to preliminary studies conducted at the Burati Health Center between July and August 2023.

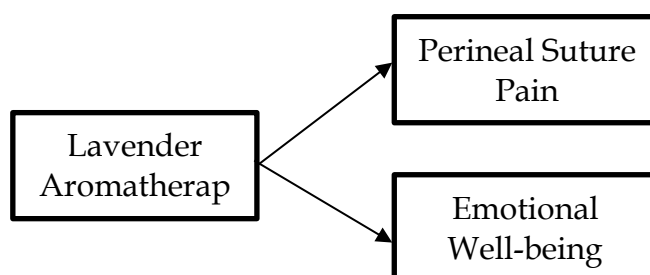
Consequently, measures must be implemented to alleviate the discomfort that postpartum women endure, and lavender aromatherapy is one method that can be utilized to alleviate discomfort (Asmadi, 2008; Nafisa, 2013). Thus, the researcher is interested in carrying out research with a focus on "The effect of lavender aromatherapy on postpartum women on perineal suture pain." This interest is based on the background information that was presented earlier.

LITERATURE REVIEW

Lavender aromatherapy has proven effective in reducing pain and anxiety, making it a valuable non-pharmacological approach for managing perineal pain in postpartum women. Its analgesic and calming properties help alleviate discomfort and promote relaxation. Research by Widayani (2017) and Vakillian shows lavender's success in reducing perineal pain and improving emotional well-being. Perineal pain, common after vaginal delivery, often limits movement, with up to 90% of women experiencing discomfort (East et al., 2012).

Lavender aromatherapy offers a non-invasive alternative to traditional pain relief, providing significant relief by addressing both physical and emotional recovery, as supported by studies from Asmadi (2008) and Nafisa (2013). So from the explanation of the studies above, the hypothesis that can be taken is that there are:

- H1: Lavender aromatherapy significantly reduces perineal suture pain in postpartum women.
- H2: Lavender aromatherapy significantly improves the emotional well-being of postpartum women experiencing perineal pain.



Picture 1. Conceptual Framework

METHODOLOGY

The type of research that was conducted was a quasi-experimental design with a group pretest-posttest design. This design is an experiment that employs a pre-test before treatment and uses a post-test after treatment (Hidayat & Uliyah, 2011; Muhammad, 2013; Sugiyono, 2018; Swarjana, 2015). As many as fifteen individuals were included in this study's population, which consisted of all postpartum mothers who were in the working area of the X Health Centre in the Tasikmalaya Regency during the first seven days after giving birth. Purposive sampling is going to be the method that is utilized in order to collect a sample size of fifteen individuals who have responded to the survey. The observation form for the perineal pain score was utilized as the research instrument. In order to analyze the parameters and degree of perineal suture pain after receiving

lavender aromatherapy, a descriptive analysis was performed using univariate data analysis. Additionally, bivariate data analysis was tested using the Paired Samples T-test and the Mann-Whitney test.

RESULTS

Table 1. Respondent Characteristics

Characteristics	N	%
Parity		
Primiparous	5	33.3
Multiparous	10	66.7
Age		
Age not at risk	11	73.3
Age at risk	4	26.7
Jobs		
Work	8	53.3
Not Working	7	46.7
Education		
Medium	8	53.3
High	7	46.7

As shown in Table 1, the majority of respondents were multiparous, with a total of ten individuals, which accounted for 66.7% of the total. Eleven of the respondents in this study, which accounts for 73.3% of the total, were individuals who were not in danger. A total of eight respondents employed five hundred and thirty-three percent of the respondents. Eight individuals, or 53.3% of the total, were among the respondents who had completed secondary education.

Table 2: Frequency Distribution of Perineal Suture Pain Before Lavender Aromatherapy Treatment

Pain	N	%
No Pain	0	0
Mild Pain	0	0
Moderate Pain	4	26.7
Severe Pain	9	60
Extreme Pain	2	13.3
TOTAL	15	100

Table 2, reveals that the majority of respondents (n=9) who experienced perineal suture pain prior to lavender aromatherapy intervention reported experiencing severe pain (60%).

Table 3. Frequency Distribution of Perineal Suture Pain After Lavender Aromatherapy

Aromatherapy		
Pain	N	%
No Pain	3	20
Mild Pain	9	60
Moderate Pain	3	20
Severe Pain	0	0
Extreme Pain	0	0
TOTAL	15	100

According to Table 3, the majority of respondents experienced mild pain following the lavender aromatherapy intervention. This was the case for as many as nine respondents, which accounts for sixty percent of the total.

Table 4. Cross Tabulation of Lavender Aromatherapy on the Reduction of Perineal Suture Pain

		After Action										Total	%
		No Pain		Mild Pain		Moderate Pain		Severe Pain		Extreme Pain			
Before Action	Pain Intensity	N	%	N	%	N	%	N	%	N	%	1	
	-	No Pain	0	0	0	0	0	0	0	0	0		
-	Mild Pain	0	0	0	0	0	0	0	0	0	0	0	0
-	Moderate Pain	3	20	1	6.7	0	0	0	0	0	0	4	26.7
-	Severe Pain	0	0	7	46.7	2	13.3	0	0	0	0	9	60
-	Extreme Pain	0	0	1	6.7	1	6.7	0	0	0	0	2	13.3

Statistical test $p\text{-value } 0,011 < \alpha (0,05)$

The findings presented in Table 4, indicate that the majority of the reduction in perineal suture pain occurred in response to pain levels prior to the implementation of lavender aromatherapy. Specifically, nine participants (60%) reported experiencing severe pain, seven reported mild pain (46.7%), and two reported moderate pain (13.3%). The results of these tests revealed a p-value of 0.011, which is less than the predetermined significance level of $\alpha (0.05)$. This indicates that lavender aromatherapy has a significant impact on alleviating pain associated with perineal sutures among patients.

DISCUSSION

1. *Perineal Suture Pain Before Administering Lavender Aromatherapy*

Perineal suture pain prior to the intervention of lavender aromatherapy was experienced by the majority of the respondents, as indicated by Table 2, which demonstrates that as many as nine of the respondents had severe pain. Pain in the perineum will persist from a few days following delivery until the infant is delivered, resulting in discomfort and dyspareunia due to spontaneous laceration. This discomfort can be further aggravated if an episiotomy-induced tear in the perineum occurs. This procedure will necessitate suturing, which may result in discomfort in the vicinity of the sutured area (Prawirohardjo, 2014).

Furthermore, the study identified perineal pain among postpartum women as an outcome of the labor process. When a woman is in labor, she experiences cervical dilatation and distension of the corpus uteri, which causes the lower segments of the uterus and cervix to stretch. From there, the pain travels to the dermatome, which is supplied by the same segment of the spinal cord as the segment that receives nociceptive input from the uterus and cervix. Pain that is caused by stimulation of superficial somatic structures and manifests as sharp, localized discomfort, particularly in regions supplied by the pudendal nerve, arises from tissue stretching and tearing in the perineum and pressure on the perineal skeletal muscles during labor (Choirunissa & Oktafia, 2019; Fatimah. & Lestari, 2019; Oxorn, 2010).

2. *Perineal Suture Pain After Lavender Aromatherapy*

As indicated by Table 3, the majority of respondents experienced mild pain following the lavender aromatherapy intervention. This was the case for as many as nine respondents, which accounts for sixty percent of the total. In line with the findings of research carried out by Widayani (2017), the use of aromatherapy resulted in a reduction in the level of pain on the pain scale from moderate pain (35.7% of the time) to light pain (39.3% of the time). These two compounds, linalyl acetate, and linalool, are the primary chemical components of lavender. In addition to its ability to inhibit chemical pathways, linalyl acetate is utilized as an anesthetic for animals. The antispasmodic properties of linalool have also been demonstrated by (Koulivand et al., 2013).

Aromatherapy with lavender contains active compounds that have qualities such as bactericides, analgesics, antidepressants, and antispasmodics. According to (López et al., 2017), aromatherapy smoking causes linalool and linalyl to stimulate the hypothalamus, which in turn causes the production of endorphin hormones. These endorphins have the ability to induce a feeling of relaxation and also have an effect as an analgesic. Additionally, lavender alters the perception of pain and functions as a sedative (Ogata et al., 2020). It is linalool acetate, which is the primary component of lavender oil, that has the ability to relax and calm the neurological system as well as tense muscles. Due to the fact that linalool possesses both hypnotic and anticonvulsive properties, lavender flowers are excellent candidates for use in aromatherapy (Kozuharova et al., 2023).

The researcher claims that the findings of this study indicate that there is a considerable reduction in the degree of pain following the use of lavender aromatherapy. This is consistent with the claims made by multiple respondents that they experience a sense of calmness upon inhaling the fragrant, fresh scent of lavender, which contains linalyl acetate, and that inhaling lavender aromatherapy from burned candles also helps to reduce pain.

3. The Effect of Lavender Aromatherapy on Perineal Suture Pain

From the findings of statistical tests conducted using the Mann-Whitney method with the assistance of the SPSS 24 program, the p-value is 0.011, which is less than the predetermined significance level of α (0.05). This indicates that lavender aromatherapy has a significant impact on alleviating pain associated with perineal sutures at the X Health Centre, located in the Tasikmalaya Regency, in the year 2023. In agreement with the findings of a study conducted by Tang (2021), which showed that essential therapy with lavender oil has a beneficial impact on anxiety and sleeplessness, as well as on pain management, this is the case. Aromatherapy with lavender is one way that can be utilized to alleviate the factors that contribute to discomfort.

Consistent with the findings of Bangun and Nur'aeni (2013), administering lavender aromatherapy to postoperative patients at Dustira Cimahi Hospital produced an effect. The aroma that is produced by aromatherapy has the ability to influence a person's feelings by interacting with the limbic and affective centers of the brain. After this, the aroma is absorbed by receptors in the nose and transmitted to the spinal cord in the brain, where it stimulates alpha waves in the brain, which are responsible for relaxing. Aromatherapy with lavender provides a relaxing impact. The aroma of lavender has the ability to induce feelings of relaxation, equilibrium, comfort, openness, and confidence in its users.

Further, lavender has the ability to alleviate sensations of pressure, stress, pain, unbalanced emotions, hysteria, impatience, and panic. Both the reduction of pain and the promotion of relaxation are potential benefits of lavender. Jasmine aromatherapy, on the other hand, is a form of aroma that has the ability to produce a romantic atmosphere. Do not use too much, though, due to the fact that the powerful scent of jasmine flowers actually causes the air to smell stale and possibly even a little bit unsettling (Rahmawati & Rohmayanti, 2015).

On the other hand, not all patients who get aromatherapy are able to manage the discomfort associated with delivery effectively. This may be the result of a number of causes, including the absence of individuals who are helpful and a setting that may not be acceptable to the woman who is in labor. Himawati and Vitaloka (2021) found that a person's suffering can be affected by a number of factors, including the surroundings and the existence of family support. Certain individuals who are afflicted with pain frequently rely on close companions or family members for assistance, protection, or support. Anxiety and dread can be mitigated with the presence of loved ones despite the continued experience of pain.

According to Tabatabaeichehr and Mortazavi's research, the absence of relatives or friends at the patient's bedside frequently makes the patient's agony more gloomy (Tabatabaeichehr & Mortazavi, 2020). Aromatherapy is a form of therapy that involves the utilization of essential oils or pure oil essence with the purpose of enhancing or preserving health, elevating the spirit, and revitalizing and renewing both the body and the soul. The practice of aromatherapy is beneficial due to the fact that it is well-known that fragrances that are both fresh and aromatic excite sensory receptors, which in turn affect other organs, allowing them to have a powerful impact on feelings (Hutasoit, 2002).

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the findings of this study indicate that the majority of postpartum women feel severe pain prior to receiving lavender aromatherapy. However, the majority of them experience modest discomfort following the administration of lavender aromatherapy – nine responders in total (60%). At the X Health Center in the Tasikmalaya Regency in the year 2023, aromatherapy with lavender has been shown to have an effect on reducing the pain associated with perineal sutures.

It is hoped that healthcare professionals, particularly midwives, will use complementary midwifery care by offering lavender aromatherapy as a non-pharmacological method to alleviate the severity of discomfort associated with perineal sutures.

FURTHER STUDY

This study has limitations, including a small sample size of 15 respondents and being conducted at a single location, the X Health Center in Tasikmalaya, limiting generalizability. External factors such as social support and environmental conditions could also influence the results but were not fully controlled. Future studies should use a larger sample and include multiple locations. Additionally, factors like social support and the mother's psychological condition should be considered, and combining lavender aromatherapy with other non-pharmacological therapies for perineal pain management could be explored.

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