

THE IMPACT OF LAVENDER AROMATHERAPY ON PAIN INTENSITY IN THE PERINEUM INJURY

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ABSTRAK : DAMPAK AROMATERAPI LAVENDER TERHADAP INTENSITAS NYERI PADA LUKA PERINEUM

Latar Belakang: Nyeri pada perineum tetap menjadi isu krusial bagi ibu pasca melahirkan. RSUD Kota Tangerang Selatan mencatat bahwa 59,6% ibu yang melahirkan per vagina mengalami luka episiotomi dan semuanya mengalami rasa nyeri, jika tidak ditangani dengan baik dapat mempengaruhi mobilitas ibu dan mengakibatkan komplikasi lain seperti infeksi nifas dan perdarahan. Salah satu cara mengurangi rasa nyeri adalah menggunakan aromaterapi lavender. Linalool (43,32%) dan Linalyl Acetat (26,32 %) adalah komponen utama dalam mengatasi rasa sakit pada luka episiotomi

Tujuan: Untuk mengetahui dampak aroma terapi lavender terhadap intensitas nyeri luka perineum pada ibu pasca salin di RSUD Kota Tangerang Selatan tahun 2024.

Metodologi: Penelitian ini menerapkan desain *quasi-experimental* dengan rancangan satu kelompok akan diukur sebelum dan sesudah perlakuan tanpa kelompok kontrol. Sampel penelitian adalah ibu pasca salin 6 jam yang mengalami luka perineum pada bulan Juli tahun 2024 dengan jumlah 30 responden menggunakan teknik *total sampling*, Uji t pasangan digunakan untuk menganalisis data penelitian ini. Lembar pengamatan adalah alat yang digunakan sebagai pengukuran intensitas nyeri.

Hasil Penelitian: Analisis data univariat di kelompok intervensi menemukan bahwa rerata rasa nyeri pada pretest sebesar 4,90 dan setelah intervensi Rerata nyeri luka perineum menjadi 2,17 sehingga terdapat selisih rata-rata nyeri sebesar 2,73. Hasil dari penelitian bivariat menggunakan uji t-sample berpasangan menunjukkan *p value* 0,000, hal ini menunjukkan bahwa ada dampak positif pemberian aroma terapi lavender terhadap nyeri luka perineum pada ibu pasca salin.

Simpulan : Aroma terapi lavender memberikan dampak dalam menurunkan Intensitas rasa nyeri di perineum ibu pasca salin di RSUD Kota Tangerang Selatan tahun 2024.

Saran: Penggunaan aromaterapi lavender dapat dijadikan terapi tambahan untuk ibu pasca salin yang memiliki luka perineum. Menyampaikan informasi dan edukasi kepada ibu, keluarga dan Masyarakat mengenai manfaat aromaterapi lavender

Kata kunci : Aromaterapi, Nyeri, Perineum, Lavender.

ABSTRACT

Background: Perineal pain remains a crucial issue for postpartum mothers. South Tangerang City Hospital noted that 59.6% of women who delivered vaginally experienced episiotomy wounds, and all experienced pain. If not properly managed, this can affect the mother's mobility and lead to other complications such as postpartum infection and hemorrhage. One way to reduce pain is to use lavender aromatherapy. Linalool (43.32%) and Linalyl Acetate (26.32%) are the main components in managing pain from episiotomy wounds.

Objectives: To determine the impact of lavender aromatherapy on the intensity of perineal wound pain in postpartum mothers at South Tangerang City Hospital in 2024.

Method: This research applies a design *quasi-experimental* With a single-group design, the data will be measured before and after treatment without a control group. The research sample was mothers who experienced perineal wounds 6 hours after delivery in July 2024 with a total of 30 respondents using the technique *total sampling* A paired t-test was used to analyze the data in this study. The observation sheet was the tool used to measure pain intensity

Results: Univariate data analysis in the intervention group found that the average pain in the pretest was 4.90 and after the intervention the average pain in the perineum was 2.17 so that there was a difference in the average pain of 2.73. The results of the bivariate study using the paired t-sample test showed *p value* 0,000, this

shows that there is a positive impact of giving lavender aromatherapy on perineal wound pain in postpartum mothers..

Conclusion: Lavender aromatherapy has an impact in reducing the intensity of pain in the perineum of postpartum mothers at South Tangerang City Hospital in 2024.

Suggestion: The use of lavender aromatherapy can be used as an adjunct therapy for postpartum mothers with perineal wounds. Providing information and education to mothers, families, and the community about the benefits of lavender aromatherapy.

Keywords: Aromatherapy, Pain, Perineum, Lavender.

INTRODUCTION

Injuries to the perineum caused by an episiotomy, also known as perineal tears, often occur due to excessive pressure in the birth canal. Perineal injuries can cause discomfort for the mother, such as pain during urination, restricted movement, anxiety during bowel movements, and can disrupt the mother-baby bond during the postpartum period.(Febi Sukma. et al., 2021).

In Indonesia, the highest maternal mortality rates occur during childbirth (60.87%), during the postpartum period (30.43%), and during pregnancy (8.70%). Postpartum infections (10%) are caused by poor perineal wound care, bleeding from ruptured birth canals (42%), retained placenta and uterine atony, eclampsia (13%), and postpartum complications (11%). Infections in the birth canal or perineal ruptures can reach between 20 and 30 percent.(Dwi et al., 2023)

In Indonesia, the incidence of mothers giving birth with perineal tears occurred in the 25-30 year age group at 24%, while in the 32-39 year age group it reached 62% (Kakiay & Wigiyanti, 2022). Postpartum mothers often experience complaints after giving birth, among the common complaints are pain due to perineal wounds/lacerations and pain in the lower abdomen caused by involution or contractions(Maryani & Himalaya, 2020)

Pain is a subjective experience, similar to how someone smells a sweet or foul odor, or tastes sweet or salty, all of which are sensory perceptions and experienced by humans from birth. However, pain is different from sensory stimulation, because pain stimulation is something that originates from tissue injury or that can cause tissue injury(Bahrudin, 2018)

Efforts to relieve pain from perineal wounds can be done through pharmacological and non-pharmacological approaches. Pharmacological approaches involve the use of medications, while non-pharmacological approaches use aromatherapy. Aromatherapy has a positive effect because it is known that fresh fragrances can stimulate sensory receptors and influence other organs, thus having a

profound effect on emotions. Aroma is received by receptors in the nose and sends additional information to the brain that regulates emotions and memory and sends signals to the hypothalamus, which controls the body's internal systems, including sexuality, body temperature, and stress response(Usmawati et al., 2022).

Common aromatherapy uses include sandalwood, cloves, lavender, ylang-ylang, cinnamon, jasmine, and rose. Lavender is widely cultivated worldwide for its numerous benefits, and lavender oil is known to have calming, anticonvulsant, antidepressant, and anxiolytic properties, due to its coumarin content (Maryani & Himalaya, 2020)

"Lavera," meaning refreshing, is the root word for lavender. In Roman times, lavender was used for bath soaks and fragrances. Lavender contains compounds such as the ketone alcohol linalool and stearylaldehyde. Lavender ketones can reduce inflammation and arthritis, while lavender esters can relieve muscle cramps, reduce anxiety, and depression(Chughthai et al., 2018)

In a study conducted by (Patimah & Sundari, 2020) One study found that combining two drops of lavender oil with distilled water in a 1:10 ratio, applying the drops to your hands and inhaling for 3 minutes, 2.5 to 5 cm from your nose, resulted in lower pain levels in postpartum mothers who used lavender oil aromatherapy ($p=0.001$).

Based on preliminary research conducted by researchers in 2023, of 707 mothers who gave birth, 360 delivered vaginally. 211 (58.6%) experienced an episiotomy. This indicates that almost all mothers who gave birth vaginally experienced perineal pain.

With this background, the researcher aims to conduct research to determine "Is there an impact of lavender aromatherapy on the intensity of perineal wound pain in postpartum mothers at South Tangerang City Hospital in 2024?"

RESEARCH METHODS

This study is a quantitative research study using a quasi-experimental design with a one-group pretest and posttest design. This one-group pretest and posttest design was conducted on a single group without a control or comparison group.

In the initial phase of the study, a pretest was conducted as an initial evaluation, allowing researchers to obtain baseline data on the respondents' conditions. Next, researchers administered treatment and then conducted a re-evaluation after the treatment, which served as information for the posttest. In the initial phase, researchers assessed the average pain level in postpartum mothers' perineal wounds 6 hours before lavender aromatherapy was administered (pretest). In the final phase, researchers re-examined the intensity of perineal wound pain in postpartum mothers 6 hours after the application of lavender aromatherapy (posttest) and calculated the average..

This study used a population of 30 respondents. The sample was taken in total. The researcher approached and introduced themselves, obtained respondents' consent, and conducted a pain scale measurement (pretest) on perineal wounds..

This study used an observation questionnaire (pretest and posttest). Indicators or signals to assess dysmenorrhea pain levels

included an observation sheet scale and a Bourbanis scale with a range of 0-10 to monitor perineal pain in mothers 6 hours after delivery, both pretest and posttest.

The researcher obtained ethical clearance under registration number KEPK/UMP/38/VI/2024. The researcher requested permission from the hospital and obtained research permit under permit letter number 2267/RSUTangsel/2024.

Univariate analysis was performed to determine the average perineal wound pain before and after the test. Bivariate analysis was performed to understand the impact of lavender aromatherapy on perineal wound pain levels in postpartum mothers using a *paired t-test*.

RESEARCH RESULTS

Univariate Analysis

Table 1 shows that in the intervention group, the average perineal wound pain in postpartum mothers before lavender aromatherapy at South Tangerang City Hospital in 2024 was 4.90 with a standard deviation of 0.759, a minimum value of 4, and a maximum value of 6. Perineal wound pain in postpartum mothers after being given lavender aromatherapy at South Tangerang City Hospital in 2024 showed an average posttest value of 2.17 with a standard deviation of 1.085, a minimum value of 0, and a maximum value of 4..

Table 1
Mean value of perineal wound pain in postpartum mothers

Perineal Wound Pain	Min	Max	Mean	SD
Pre test	4	6	4.90	0.759
Post Test	0	4	2.17	1.085

Bivariate Analysis

Table 2
The Impact of Lavender Aromatherapy on Pain in the Perineal Wound of Postpartum Mothers

Perineal Wound Pain	Mean	Mean Difference	P value
Pretest	4.90		
Posttest	2.17	2.73	.000

Based on table 2, it can be seen that the average pain value for perineal wounds before and after administration of lavender aromatherapy was 2.73.

The results of the difference test using *wilcoxon* on the administration of lavender aromatherapy on the intensity of perineal wound pain in postpartum mothers at South Tangerang

City Hospital in 2024 with a p value of 0.000 (<0.05), which means there is an impact of lavender aromatherapy treatment on the intensity of perineal wound pain in postpartum mothers at South Tangerang City Hospital in 2024..

DISCUSSION

Average Intensity Value of Perineal Wound Pain in Postpartum Mothers.

The results of the study showed that perineal wound pain in postpartum mothers before the administration of lavender aromatherapy at South Tangerang City Hospital in 2024 resulted in an average pretest value of 4.90 with a standard deviation of 0.759, a minimum value of 4 and a maximum value of 6.

Perineal wound pain in postpartum mothers after being given lavender aromatherapy at South Tangerang City Hospital in 2024 showed an average pretest value of 2.17 with a standard deviation of 1.085, a minimum value of 0 and a maximum of 4.

Pain is an unpleasant emotional and sensory experience resulting from actual or potential tissue damage, or described in terms of such damage. Pain is a multidimensional sensory experience. This phenomenon can vary in intensity (mild, moderate, severe), nature (dull, burning, sharp), duration (transient, intermittent, persistent), and distribution (superficial or deep, localized or diffuse). Although pain is a sensation, it contains cognitive and emotional elements that are reflected in the form of suffering. Pain is also associated with avoidance reflexes and modification of autonomic output (Bahrudin, 2018)

Multiple mechanisms underlying pain mechanisms such as Nociception, peripheral sensitization, phenotype modification, central sensitization, ectopic excitability, structural reorganization, and reduced inhibition then exist. Four mechanisms are involved in tissue injury stimuli and subjective pain experience: transduction, transmission, modulation, and perception. (Chughthai et al., 2018)

Pain tolerance levels vary from person to person, with some experiencing discomfort, particularly in the perineal area. Perineal pain is physiologically normal in postpartum mothers. However, pain can disrupt a mother's daily activities and negatively impact mobility if she is unable to adapt. This can lead to complications such as postpartum infection and bleeding. The pain caused by tearing and contractions may be uncomfortable (Maryani & Himalaya, 2020)

At the Royal Victoria Hospital in Australia, a study showed that perineal pain rates reached nearly 90%; 33% experienced it while walking, 39% while sitting, and 45% while lying down. Acute pain is the type of pain experienced by postpartum mothers, causing fear and negatively impacting their experience of motherhood. Therefore, pain during

the postpartum period requires serious attention and is crucial for management (Maryani & Himalaya, 2020)

Non-pharmacological therapies, which typically have minimal side effects, are particularly useful for patients with drug intolerance, multiple comorbidities, and refractory pain (associated with coronary heart disease). Furthermore, these non-pharmacological therapies can also relieve psychological symptoms, such as anxiety and depression. (Ni Wayan et al, 2023)

Based on the study, researchers revealed that the reduction in pain in perineal wounds occurred because respondents had a positive view of the complementary care provided, one of which was through the use of lavender aromatherapy to relieve pain in perineal wounds..

The Impact of Lavender Aromatherapy on Pain Intensity in Perineal Wounds in Postpartum Mothers.

Based on the results of the study, the difference in the average value of episiotomy wound pain before and after the administration of lavender aromatherapy was 2.73. The results of the difference analysis using Wilcoxon on the application of lavender aromatherapy to perineal wound pain in postpartum mothers at South Tangerang City Hospital in 2024 showed a p value of 0.000 (<0.05), which indicates the effect of lavender aromatherapy on episiotomy wound pain in postpartum mothers at South Tangerang City Hospital in 2024.

Aromatherapy with lavender oil is believed to have a calming effect on tense nerves and muscles (carminative) after a day of activity. The main components of lavender flowers are linalyl acetate and linalool (C₁₀H₁₈O). Linalool is the main active compound that contributes to lavender's anti-anxiety (relaxing) effects. Linalool and linalool acetate stimulate the parasympathetic nervous system and have narcotic effects, while linalool acts as a sedative. (Chughthai et al., 2018)

Lavender aromatherapy contains anti-inflammatory properties and essential oils, and its scent can relax tense muscles, thus reducing pain. Inhaled lavender aromatherapy enters through the nose through two channels: the lateral and medial. These branches are the parts of the brain that act as centers for memory, emotion, and various intelligences. This part is responsible for the location of chemicals in aromatherapy and stimulates the brain's ability to recognize scents, thus creating a mood and feeling of calm that can

reduce pain in postpartum mother. (Patimah & Sundari, 2020)

The results of the study in the intervention group showed that the scale score after lavender aromatherapy decreased from 6.92 to 3.83. The study, conducted using the Mann-Whitney test, found that the p-value (0.000) was less than α (0.05), thus concluding that lavender aromatherapy had an impact on reducing pain intensity (Maryani & Himalaya, 2020)

A study (Chughthai et al., 2018) found that aromatherapy with lavender essential oil, R. damascena, and a combination of both can reduce the severity of labor pain as a simple, non-pharmacological method. A comparison of the mean pain intensity in the four groups before the intervention showed a significant difference ($P = 0.001$). Pre-test results showed that the aroma of essential oils (R. damascena, lavender, and a combination of both) significantly reduced the average pain intensity at 30 and 60 minutes after the intervention compared to distilled water ($P = 0.001$).

Aromatherapy is a non-pharmacological therapy approach that does not require direction, is non-invasive, affordable, simple, effective, and safe without adverse side effects. (Agni Saila Rizqiah, Sri Dinengsih, 2023). Aromatherapy is beneficial because fresh, fragrant scents can stimulate sensory receptors and influence other organs, affecting feelings. Receptors in the nose pick up scents and transmit them to the brain, which controls memory and emotions, and to the hypothalamus, which controls temperature, sexual function, and stress response. (Usmawati et al., 2022)

Lavender aromatherapy significantly reduces pain in perineal wounds and post-operative wounds in postpartum mothers during their recovery period. Lavender aromatherapy has no side effects. Lavender essential oil has a positive impact on anxiety and can help manage pain. Lavender aromatherapy can be an option for managing pain caused by perineal wounds (Maryani & Himalaya, 2020)

Based on the explanation above, researchers concluded that lavender aromatherapy is effective in reducing pain in postpartum perineal wounds due to its compounds. Furthermore, several studies have scientifically proven that lavender aromatherapy can reduce pain in perineal wounds..

CONCLUSION

There is an effect of using lavender aromatherapy on the intensity of pain in the perineum of postpartum mothers.

SUGGESTIONS

Lavender aromatherapy can be considered as an option by healthcare professionals, particularly midwives in postpartum wards, to promote its benefits. It can be integrated into postpartum maternal care and the development of pain management as a complementary therapy..

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