

THE COMBINATION OF GIVING WARM COMPRESSES AND LAVENDER AROMATHERAPY TO REDUCE THE INTENSITY OF LABOR PAIN DURING THE FIRST ACTIVE PHASE

Kiki Suci Utari¹, Heni Purwanti², Tuti Meihartati³, Dwi Hartati⁴

^{1,2,3,4} Institute of Health Technology and Science Wiyata Husada Samarinda

*Email correspondence: kikisuciutari12@gmail.com

ABSTRAK : KOMBINASI PEMBERIAN KOMPRES HANGAT DAN AROMATERAPI LAVENDER UNTUK MENGURANGI INTENSITAS NYERI PERSALINAN PADA FASE AKTIF PERTAMA

Latar Belakang: Nyeri saat persalinan merupakan manifestasi dari kontraksi otot rahim. Nyeri persalinan dapat menimbulkan stres yang menyebabkan pelepasan hormon seperti katekolamin dan steroid secara berlebihan, yang secara langsung dapat mempengaruhi kontraksi rahim dan secara tidak langsung mempengaruhi kondisi janin. Penurunan intensitas nyeri persalinan dapat ditangani secara nonfarmakologis, antara lain dengan pemberian kombinasi kompres hangat dan aromaterapi lavender.

Tujuan: Penelitian ini bertujuan untuk mengetahui pengaruh kombinasi kompres hangat dan aromaterapi lavender terhadap penurunan intensitas nyeri persalinan fase aktif I di RS Akhmad Berahim.

Metode: Penelitian ini merupakan penelitian kuantitatif dengan menggunakan desain pre-experiment group pretest-posttest design. Metode pengambilan sampel menggunakan nonprobability sampling dengan teknik purposive sampling sebanyak 27 orang. Instrumen yang digunakan adalah SOP kombinasi pemberian kompres hangat dan aromaterapi lavender serta lembar observasi numerik rating scale (NRS). Data dianalisis menggunakan uji Wilcoxon.

Hasil : Dari 27 responden sebelum dilakukan kombinasi kompres hangat dan aromaterapi lavender mayoritas mengalami nyeri berat sebanyak 24 orang (88,9%), nyeri sedang sebanyak 3 orang (11,1%), dan setelah dilakukan kombinasi kompres hangat dan aromaterapi lavender sebanyak 3 orang (11,1%) mengalami nyeri berat, 24 orang (88,9%) mengalami nyeri sedang.

Kesimpulan: Penelitian ini menunjukkan nilai p-value 0,000 yang menunjukkan bahwa terdapat pengaruh kombinasi pemberian kompres hangat dan aromaterapi lavender terhadap penurunan intensitas nyeri persalinan fase aktif I di RS Akhmad Berahim.

Saran Diharapkan kepada bidan dapat mengenal berbagai macam terapi non farmakologi untuk mengatasi nyeri persalinan salah satunya terapi kompres hangat dan aromaterapi lavender. Penggunaan aromaterapi lavender dan kompres hangan pada saat persalinan aktif dapat membantu mengurangi nyeri saat persalinan

Kata Kunci : Aromaterapi Lavender, Kompres Hangat, Nyeri Persalinan

ABSTRACT

Background: Pain during labour is a manifestation of uterine muscle contractions. Labour pain can cause stress, which causes excessive release of hormones such as catecholamines and steroids, which can directly influence uterine contractions and indirectly influence the condition of the fetus. Reducing the intensity of labour pain can be managed non-pharmacologically, including by administering a combination of warm compresses and lavender aromatherapy.

Purpose: This study aimed to determine the effect of combining warm compresses and lavender aromatherapy on reducing the intensity of labour pain in the first active phase at Akhmad Berahim Hospital.

Method: This was quantitative research using a pre-experiment group pretest-posttest design. The sampling method used nonprobability sampling with a purposive sampling technique of 27 people. The instrument used an SOP for a combination of giving warm compresses and lavender aromatherapy and a numeric rating scale (NRS) observation sheet. Data were analyzed using the Wilcoxon test.

Results: Of the 27 respondents before the combination of warm compresses and lavender aromatherapy, the majority experienced severe pain, 24 people (88.9%), three people experienced moderate pain (11.1%), and after the combination of warm compresses and lavender aromatherapy three people (11.1%) experienced severe pain, 24 people (88.9%) experienced moderate pain.

Conclusion: This study indicates that the p-value is 0.000, which shows that there is an effect of the combination of giving warm compresses and lavender aromatherapy on reducing the intensity of labour pain during the first active phase at Akhmad Berahim Hospital.

Suggestion It is expected that midwives can get to know various kinds of non-pharmacological therapies to overcome labor pain, one of which is warm compress therapy and lavender aromatherapy. The use of lavender aromatherapy and hangan compresses during active labor when I can help reduce pain during

Keywords: *Labor Pain, Lavender Aromatherapy, Warm Compress*

INTRODUCTION

Childbirth is a normal physiological event. However, labor does not always run normally because there are several complications of the labor process (Irawati et al, 2019). In labor, labor pain is inseparable. Physiologically, all women who give birth will experience pain during labor and statistically labor pain cannot be tolerated by two out of three maternity mothers (Sari & Riona Sanjaya, 2020).

In their study, Sagita & Martina, (2019) stated that labor pain can cause stress which causes excessive release of hormones such as catecholamines and steroids. This hormone can cause smooth muscle tension and vasoconstriction of blood vessels. This can result in decreased uterine contractions, decreased uteroplacental circulation, reduced blood and oxygen flow to the uterus, and the onset of uterine ischemia which makes implus pain multiply. At the time of 1 delivery, pain is felt with the most dominant and long time. During the period when the first phase is active, most mothers experience severe pain because uterine activity begins to be more active, uterine contractions become longer, stronger, and more frequent (Seftianingtyas et al., 2021). If the pain problem is not resolved, it will cause several symptoms such as anxiety, fear, and stress which will increase the intensity of pain (Capri, M et al., 2023).

According to the World Health Organization (WHO), this labor pain can cause mothers to prefer other labor alternatives to avoid labor pain, namely sectio caesarea labor (Tangkas & Suarmini, 2020). Research in the UK shows that 93.5% of women describe pain as severe and unbearable, while in Finland 80% describe pain as very severe pain (Sari & Riona Sanjaya, 2020). Research in Australia reports the level of labor pain in women will differ based on each opening, at 0-3 cm opening moderate pain, 4-7 cm opening is severe pain and 8 cm > opening is unbearable (Hariyanti & Astuti, 2021).

Ningrum said in (Sari & Riona Sanjaya, 2020) 90% of the labor process in Indonesia is still accompanied by pain, although in some people who have advanced childbirth without being accompanied by pain around 7-14%. Other studies suggest that

maternity mothers will experience severe pain, only about 2-4% experience mild pain (Seftianingtyas et al., 2021). In the 2017 IDHS survey, the most labor complications were anxiety or severe pain as much as 53.5% and prolonged labor as much as 40.6% (Hariyanti & Astuti, 2021). Pain conditions that are not managed properly can worsen MMR that has not reached the national target of 359 per 100,000 KH (Sari & Riona Sanjaya, 2020).

According to data from the Ministry of Health of the Republic of Indonesia (Kemenkes RI, (2022) in North Kalimantan province in 2021, 92.5% of childbirth assisted by health workers was 92.5%. Based on the results of research at Soemarno Sostroatmodjo Hospital, Tanjung Selor, North Kalimantan, with a total sample of 30 maternity mothers during the active phase I, there were 25 maternity mothers experiencing severe pain and 5 maternity mothers with moderate pain (Tempang Sanni, 2023). In Tana Tidung Regency in January-December 2022, there were 72.13% of maternity mothers who gave birth spontaneously vaginally and 27.86% of maternity mothers who were referred due to labor complications that occurred and could not be handled (RSUD Akhmad Berahim, 2022). Based on the results of a preliminary study conducted with interviews on May 8-19, 2023 in the delivery room of RSUD Akhmad Berahim where 15 samples of maternity mothers during the first phase were active, researchers obtained data that 12 out of 15 respondents said severe and unbearable pain, seemed restless, unsettled and uncomfortable in the abdominal area through backwards when contractions occurred and 3 maternity mothers who experienced pain when contractions occurred but did not experience anxiety and remain calm in responding to the labor process.

Efforts in handling labor pain management when 1 active phase is carried out at RSUD Akhmad Berahim based on preliminary studies are in the form of labor companions either by husbands or families, relaxation techniques and adjusting the position as comfortable as possible for maternity mothers. To maximize the efforts that have been made, researchers are interested in reducing labor pain in

other non-pharmacological ways, namely by using warm compresses in combination with lavender aromatherapy.

One non-pharmacological method to reduce pain during labor is by means of warm compresses, warm compresses have a very low risk, are cheap, simple and without adverse effects and can increase the comfort of maternity mothers (Fitri Hastutining D et.al, 2022).

In previous research, aromatherapy has been widely used to help reduce natural pain and even overcome psychological disorders and comfort disorders such as anxiety, stress, depression and so on (Hatami Rad, 2021). The results showed that labor pain was reduced with lavender aromatherapy, as evidenced by the average pain intensity in the intervention group before lavender aromatherapy (pretest) was 6.80, while after being given aromatherapy (posttest), the average pain intensity was 5.67, resulting in a decrease in pain intensity by 1.13 points (Darmawan et al., 2022). In addition to aromatherapy, one way to reduce labor pain is to give warm compresses in the early phases of labor because it can cause a decrease in fatigue, relaxation of muscle spasms, increased comfort, and decreased anxiety. The results of the study (Kholisoh et al., 2022) showed that the average intensity of labor pain during the active phase I experienced a significant decrease ranging from 8.3 to 6.7. Both of these non-pharmacological treatments are expected to help reduce the intensity of pain in maternity mothers during the active phase 1.

Labor pain when I is severe pain with a relatively long time so it needs to be considered in the handling and management of pain management (Choirunissa et al., 2021). Management and monitoring of labor pain, is very important especially at this stage, because it determines whether the mother can deliver vaginally or ends up with an action or referral due to complications caused by labor pain (Seftianingtyas et al., 2021). Mender said that pain is physiological, but if not handled properly it will increase pain and can have a negative impact on

both mother and fetus including postpartum depression, bleeding, old partus, increased blood pressure and pulse, fetal hypoxia, and increased anxiety and fear (Juliani, W. Sanjaya et al., 2020). Therefore, treatment is needed to overcome labor pain so as to allow mothers to adapt to the pain (Juliani, W. Sanjaya et al., 2020). Therefore, researchers estimate that the application of a combination of the use of warm compresses and lavender aromatherapy by inhalation will be more effective in influencing labor pain so that it is expected to reduce the intensity of pain in maternity mothers when 1 phase is active.

Based on these data, researchers are interested in proving the effect of the combination of warm compresses and lavender aromatherapy on reducing the intensity of labor pain during 1 active phase.

RESEARCH METHODS

Type of quantitative research with pre-experimental research methods with one group pretest-posttest design approach. The population of this study is all maternity mothers during the active phase 1 from April to June 2023 totaling 82 maternity mothers. Purposive sampling *sampling* dengan set a minimum sample size calculation using the G*Power 3.1.9.2 application obtained as many as 27 respondents. The research was conducted at RSUD Akhmad Berahim, Samarinda. The instrument uses a numeric rating scale (NRS). Analysis of univariate and bivariate data (t-test).

RESEARCH RESULTS

Based on table 1 above, it was obtained that from 27 respondents, it showed that the characteristics of young people at risk (<20 years) were 4 people (14.8%), and most of them were aged 20-35 years or age not at risk as many as 18 people (66.7%), had a high school education as many as 10 people (37.0%), as housewives as many as 19 people (70.4%) and the frequency of first pregnancy as many as 8 people (29.6%).

Table 1
Characteristics of Respondents at RSUD Akhmad Berahim

Characteristics Respondents	Frequency	Persentase (%)
Age		
Young age at risk (< 20 years)	4	14.8
Age is not at risk (20-35 years)	18	66.7
Old age at risk (> 35 years)	5	18.5
Education		
Primary School	2	7.4
Junior High School	8	29.6
Senior High School	10	37.0
College	7	25.9
Work		
Civil servants	5	18.5
Self employed	2	7.4
Private Employees	1	3.7
Housewives	19	70.4
Pregnancy Frequency		
First	8	29.6
Second	5	18.5
Third	7	25.9
Fourth and above	7	25.9

Univariate Analysis

From the data in the table, it can be seen that the level of labor pain during the first active phase at RSUD Akhmad Berahim, Samarinda before the intervention of giving warm compresses and lavender aromatherapy, of the 27 respondents

mostly experienced severe pain as many as 24 people (88.9%), who experienced moderate pain as many as 3 people (11.1%), while those who did not experience pain, mild pain and very severe pain did not exist.

Table 2
Labor Pain When I Active Phase Before Intervention at RSUD Akhmad Berahim

Labor Pain During the Active Phase I (Before)	Frequency	Persentase %
Painless	0	0
Mild pain	0	0
Moderate pain	3	11,1
Severe Pain	24	88,9
Very severe pain	0	0

Table 3
Labor Pain When I Active Phase After Intervention at RSUD Akhmad Berahim

Labor Pain During the Active Phase I (After)	Frequency	Persentase %
Painless	0	0
Mild pain	0	0
Moderate pain	24	88,9
Severe Pain	3	11,1
Very severe pain	0	0

From the data in the table, it is known that the level of labor pain during the first active phase at

RSUD Akhmad Berahim, Samarinda before the intervention of giving warm compresses and

lavender aromatherapy, of the 27 respondents, most of them experienced moderate pain as many as 24 people (88.9%), who experienced severe pain as many as 3 people (11.1%) while those who did not experience pain, mild pain and very severe pain did not exist.

Bivariate Analysis

From the table data, it is known that there were 21 maternity mothers who experienced a

decrease in labor pain levels after being given an intervention in the form of a combination of warm compresses and lavender aromatherapy, and 6 maternity mothers did not experience changes in the intensity of labor pain. The Wilcoxon test produces a p-value = 0.000 ($\alpha < 0.05$) it can be concluded that there is a difference in labor pain during the active phase I before and after the intervention.

Table 4
Differences in Labor Pain During the Active Phase Before and After Intervention at RSUD Akhmad Berahim 2023

		N	Mean Rank	Sum of Ranks	Z	p- Value
Nyeri Persalinan Post Kategori - Nyeri Persalinan Pre Kategori	Negative Ranks	21	11,00	231	-4,583	0,000
	Positive Ranks	0	0	0		
	Ties	6				

DISCUSSION

Intensity of Labor Pain During the Active Phase Before a Combination of Warm Compresses and Lavender Aromatherapy

Based on the results of the analysis, it was found that before the combination of warm compresses and lavender aromatherapy, of the 27 respondents, most experienced severe pain, 24 people (88.9%), as many as 3 people (11.1%) experienced moderate pain, while those who experienced no pain, mild pain and very severe pain did not exist.

The International Association for the Study of Pain (IASP) defines pain as an unusually unpleasant sensory and emotional experience related to actual or potential (Karcioglu et al., 2018). Pain is often described in terms of tissue destructive processes such as pricking, burning heat, twisting, such as emotions in feelings of fear, nausea and motion sickness (Fortune, 2020).

Labor pain at time I is visceral pain caused by changes in the cervix, distension of the lower segment of the uterus, stretching of tissue during opening, and pressure on surrounding structures and nerves, the pain will be felt in the lower abdomen (Yuandira et al, 2021). Referral pain occurs when pain originating from the uterus radiates to the abdominal wall, lumbosacral area in the back, buttocks, thighs and lower back Zweling in (Yuandira et al, 2021).

The pain felt will be heavier, sharper and result in the spread of pain sensations (Yuandira et al, 2021). It can be seen from the results of this study in labor when the I active phase was found that most maternity mothers experienced severe pain.

According to researchers that labor pain in maternity mothers who have a severe pain vulnerability that is in the first phase of the active phase of the maximum dilation period where the contractions are getting stronger and more frequent, the duration of his is increasing and with the uterine contractions that are getting stronger, the decline in the fetal head will be faster so that in this phase is a very tiring and very heavy phase in maternity mothers.

This is in accordance with research conducted in Australia, the level of labor pain in women will differ based on each opening, at the opening 0-3 cm moderate pain, the opening of 4-7 cm is severe pain and the opening of the > 8 cm is unbearable pain (Sari & Riona Sanjaya, 2020).

The results showed that the largest frequency of maternity mothers who were respondents in this study was the age of 20-35 years, namely 18 people (66.7%). This shows that some respondents in reproductive age are healthy and physiologically at that age allows mothers to still be strong in withstanding labor pain. However, a person's pain response is very individual and is influenced by various factors such as environment, race, certain actions and also a person's coping mechanism in dealing with pain. This is in line with the results of Ayu & Supliyani's (2017) research; and Maryuni (2020) in the results of her research where the majority of respondents have the age of 20-35 years also stated that there is no relationship between age and the intensity of labor pain (Benly et al, 2023).

Then at the education level, the majority of high school education levels were obtained which were 10 people (37.0%). According to Nur (2021) in

(Benly et al, 2023) highly educated mothers will respond more rationally to the information provided and will think about the extent of the benefits they will get from the information. But in fact according to researchers that this does not happen to everyone, pain can appear in anyone and anywhere, almost all maternity mothers must feel pain, both in maternity mothers who have low education and who are highly educated. This is in line with research by Khoirunnisa et al., 2017 in (Benly et al, 2023) on maternal characteristics and response to labor pain shows that there is a weak correlation between education level and maternal labor pain intensity.

In the type of work, the majority of maternity mothers work as housewives, namely 19 people (70.4%). According to Chen et al., 2023; Gumy et al., 2022 in (Fitri Hastutining D.et.al, 2022) the type of work has no clear relationship with various pregnancy and childbirth problems. Non-working mothers have more free time so can concentrate only on their pregnancy and childbirth. Her free time can be used to find information about pregnancy and childbirth. But this has no effect on the pain felt by the mother during childbirth. Results from research by Irwan et al., 2019; Setiawati et al., 2022 is a $p > 0.05$ value which shows that there is no relationship between work and labor pain during 1 active phase. Work has no relationship with labor pain felt by maternity mothers during 1 active phase (Fitri Hastutining D.et.al, 2022).

The highest number of respondents' pregnancies was in the pregnancy of the first child, which was 8 people (29.8%). Research by Deng et al., 2021; Robert & Andrew, 2022 in (Fitri Hastutining D.et.al, 2022) pregnant women with primiparous parity still have no idea what happens during childbirth, while multiparous mothers already have an idea of pregnancy and the previous labor process, so that during pregnancy they tend to be more mentally and psychologically prepared. According to researchers, the pain sensation is generally felt very large, especially by mothers who have just undergone the delivery of their first child.

Mothers in labor during the first active phase require non-pharmacological pain reduction techniques that are easy to do and do not require expensive costs, can increase maternal comfort during childbirth and have an influence on effective coping on the labor experience such as warm compresses (Fitri Hastutining D.et.al, 2022) and lavender aromatherapy (Andini et al., 2022).

Warm compresses have a working principle of heat delivery through conduction where heat is attached to the affected area, namely on the back to improve blood circulation, provide comfort and

reduce client anxiety so that muscle relaxation occurs which causes muscle contractions to decrease and pain to decrease (Irawati et al, 2019).

Aromatherapy can provide beneficial fragrance effects either through the inhalation method or the topical method. Aromatherapy inhaled can have a relaxing effect on the physical and psychic. Lavender can increase alpha waves in the brain and these waves help to create a relaxed and calm state for the mother so that the pain felt by the mother can be reduced (Sagita & Martina, 2019).

The results of the study by (Parapat et al., 2022) found that from 12 respondents before being given a warm compress, the average intensity of labor pain during the active phase I was obtained the results showed that the average score of labor pain before giving warm water compresses was 7.33, while the average score of labor pain after being given warm compresses was 3.92. It can be concluded that after being given a warm compress, the average respondent experienced a decrease in the scale of labor pain, which was 3.41 points. The results of statistical tests using paired t-tests obtained p-values of $0.000 < 0.05$ there was an effect of giving warm water compresses on reducing the scale of pain in labor during the active phase I.

The results of the same study were also obtained by (Juliani, W. Sanjaya et al., 2020), it was found that from 16 respondents before being given lavender aromatherapy, the average intensity of labor pain during the active phase I was obtained 7.19 with a standard deviation of 1.601. Meanwhile, after lavender aromatherapy was given 5.50 with a standard deviation of 1.932 with paired t-test results, p value value $0.000 < 0.05$ there was an effect of lavender aromatherapy on reducing labor pain during the active phase I in childbirth women.

Intensity Of Labor Pain During The Active Phase After A Combination Of Warm Compresses And Lavender Aromatherapy

Based on the results of the analysis, it was found that after giving a combination of warm compresses and lavender aromatherapy, of the 27 respondents, most experienced moderate pain as many as 24 people (88.9%), who experienced severe pain as many as 3 people (11.1%) while those who did not experience pain, mild pain and very severe pain did not exist.

The data above shows that most mothers give birth after being given a combination of warm compresses and lavender aromatherapy experience moderate pain. The use of a combination of warm compresses and lavender aromatherapy during labor stimulates the release of neuromodulators, namely

endorphins and encaffeine, which function as pain relievers that can produce a feeling of calm so that they can affect labor pain levels (Ma'rifah Umi et al, 2022).

According to researchers, the reduction to moderate pain after being given a combination of warm compresses and lavender aromatherapy because of the provision of warm compress therapy with hot bulbs wrapped in cloth in maternity mothers with the mother's position as comfortable as possible can reduce muscle tension and anxiety so that it can make the body feel relaxed because of the warmth of water that helps blood vessels dilate so that blood flow becomes smooth, while lavender aromatherapy is given to mothers Childbirth through a diffuser can create a feeling of calm and pleasure so that it affects in overcoming anxiety and pain so that the mother is more comfortable in labor.

The results of this study are supported by research conducted by (Ekawati & Norhapifah Hestri, 2020), it is known that the average intensity of pain in maternity mothers after being given warm compress hydrotherapy is moderate pain, there are differences in measurements before and after giving warm compress hydrotherapy interventions. Giving warm compresses can reduce pain where warmth can open the dilation of blood vessels and there will be a decrease in muscle tension so as to cause comfort, then the pain felt will decrease or disappear (Fitri Hastutining D.et.al, 2022).

Research by (Silangit & Kes, 2021), it is known that the average intensity of pain in maternity mothers after lavender aromatherapy is in moderate pain, it can be seen that there is a difference between measurements before and after intervention in the form of lavender aromatherapy. Lavender aromatherapy is an essential oil that is well known for having a calming effect, having a relaxing and anti-neurodepressant effect. Because this oil can provide a feeling of calm, it can be used as stress management (Juliani, W. Sanjaya et al., 2020). The main ingredient of lavender aromatherapy is linalool acetate, which can relax and relax the nervous system and tense muscles. In addition, a few drops of lavender oil can help overcome insomnia, improve mood, reduce anxiety, increase alertness, and of course provide a relaxing effect (Juliani, W. Sanjaya et al., 2020).

The Effect of Giving a Combination of Warm Compresses and Lavender Aromatherapy on Reducing the Intensity of Labor Pain During the Active Phase Before and After at RSUD Akhmad Berahim 2023

Based on the results of the analysis, it was found that from 27 respondents, as many as 24 people experienced labor pain after the intervention giving a combination of warm compresses and lavender aromatherapy decreased compared to before the intervention. There were 6 respondents who did not experience a decrease in the intensity of labor pain after the intervention of giving a combination of warm compresses and lavender aromatherapy, this is because researchers categorize pain intensity but there is still a change in the number of NRS, it's just that the figure is still in the same pain category. None of the respondents experienced labor pain after the intervention, giving a combination of warm compresses and lavender aromatherapy increased compared to before the intervention. Obtained from the results of the Wilcoxon test P-Value value of $0.000 < 0.05$ so that H_a is accepted, which means there is an effect of the combination of warm compresses and lavender aromatherapy on reducing the intensity of labor pain during the active phase I at RSUD Akhmad Berahim

From the data above, it is known that most maternity mothers before being given a combination of warm compresses and lavender aromatherapy experience severe pain and after being given a combination of warm compresses and lavender aromatherapy experience moderate pain. There was a decrease in pain intensity before and after the combination of warm compresses and lavender aromatherapy.

According to researchers, this is because the pain felt by maternity mothers can be expertized by the warm sensation obtained from warm compresses, while lavender aromatherapy has a relaxing effect so that maternity mothers are able to control the sensation of pain during uterine contractions.

Warm compresses have the principle of delivering heat by conduction where due to heat transfer from hot bulbs into the back causes blood circulation to become smooth and muscle tension decreases so that pain from uterine contractions and smooth muscle contractions will be reduced (Ekawati & Norhapifah Hestri, 2020). While aromatherapy contains molecules that when released into the air as water vapor are inhaled through the nose and lungs then enter the bloodstream, along with that the steam will be passed to the limbic system which is responsible for the system of integration and expression of feelings, memories, emotions and physical stimuli. Lavender aromatherapy is very effective and beneficial when inhaled or used on the outside, because the sense of smell is closely related to human emotions. When lavender aromatherapy is

inhaled, the body will respond psychologically (Intanwati et al., 2022).

The results of research by (Kholisoh et al., 2022) namely the intensity of labor pain at Dinda Hospital in Tangerang City in 2022 found that the average labor pain before being given a warm compress was 8.3 (severe pain) and the average labor pain after being given a warm compress was 6.7 (moderate pain). Giving warm compresses will make respondents feel more comfortable. This is because warm compresses can increase blood flow to a part and reduce edema which will provide an analgesic effect by slowing down the rate of nerve delivery so that pain impulses reach the brain less and pain perception will decrease (Kholisoh et al., 2022).

The same results were also obtained by (Sagita & Martina, 2019), namely the intensity of labor pain at PMB Tri Yunida Kotabumi in 2019, the average labor pain before lavender aromatherapy was 7.03 (severe pain) and the average labor pain after lavender aromatherapy was 5.00 (moderate pain). Lavender aromatherapy can increase alpha waves in the brain, these waves help to create a relaxed and calm state for the mother so that the pain felt by the mother can be reduced (Sagita & Martina, 2019). Molecules from aromatherapy can stimulate the limbic system, which is the center of emotion where all emotional expression is generated and affects endocrine and autonomic nerves, which have a direct relationship with feelings and memories, and can reduce anxiety that affects pain because there is a direct relationship between pain and anxiety (Patimah & Sundari, 2020).

Lavender molecules and particles when inhaled will enter through the nose, then be received by nerve receptors as a good signal and then interpreted as a pleasant smell, then the message affects the limbic system as a person's emotional center. So that the nerves and blood vessels relax and finally pain is reduced according to Susilarini in (Sari, P. N., & Riona Sanjaya, 2020).

The findings of this study show that the combination of warm compresses and lavender aromatherapy is one way of an easy and practical non-pharmacological method in reducing labor pain. Warm compresses function to overcome or reduce pain, where heat can relieve ischemia by reducing uterine contractions and launching blood vessels so that they can relieve pain according to (Fitri Hastutining D.et.al, 2022). While lavender aromatherapy contains one of the derivatives of monostunned, namely linalool, linalool is the main active ingredient that plays a role in the anti-anxiety (relaxation) effect directly which will stimulate the

thalamus to secrete enkephalins, which act as pain relievers according to the Goddess in (Yuandira, et al, 2021).

CONCLUSION

Labor pain before the intervention of giving a combination of warm compresses and lavender aromatherapy was obtained from 27 respondents experiencing moderate pain as many as 3 people (11.1%), who experienced severe pain as many as 24 people (88.9%), while those who did not experience pain, mild pain and very severe pain did not exist.

Labor pain after the intervention of giving a combination of warm compresses and lavender aromatherapy was obtained from 27 respondents, most of whom experienced moderate pain as many as 24 people (88.9%), who experienced severe pain as many as 3 people (11.1%) while those who did not experience pain, mild pain and very severe pain did not exist.

Wilcoxon test results P-Value $0.000 < 0.05$ so that H_a is accepted which means there is an effect of a combination of warm compresses and lavender aromatherapy on reducing the intensity of labor pain during the active phase I at RSUD Akhmad Berahim.

SUGGESTION

It is expected that midwives can get to know various kinds of non-pharmacological therapies to overcome labor pain, one of which is warm compress therapy and lavender aromatherapy. The use of lavender aromatherapy and hangan compresses during active labor when I can help reduce pain during labor as an additional substitute for pharmacological therapy and also the use of warm compresses and lavender aromatherapy is very easy, cheap, and without side effects. For hospitals, this research can be used as material for making policies related to the management of labor pain therapy

REFERENCES

- Andini, I. F., Puspita, Y., & Susanti, E. (2022). *Pengaruh Pemberian Aromaterapi Lavender Pada Ibu Bersalin Kala I Fase Aktif Terhadap Persepsi Nyeri Persalinan*. *Jurnal Kesehatan Mercusuar*, 5(2), 10–18. <https://doi.org/10.36984/jkm.v5i2.272> [Diakses pada 19 Juni 2023]
- Benly et al. (2023). *Pengaruh Kompres Air Hangat Terhadap Intensitas Nyeri haid*. 4, 1751–1757. <http://journal.universitaspahlawan.ac.id/index.php/jkt/article/download/15421/12389/50711> [Diakses pada 19 Juli 2023] Bertone, A. C., &

- Dekker, R. L. (2021). *Aromatherapy in Obstetrics: A Critical Review of the Literature*. *Clinical Obstetrics and Gynecology*, 64(3), 572–588. <https://doi.org/10.1097/GRF.00000000000000622> [Accessed on 28 Agustus 2023]
- Capri, M & Satya, N. (2023). Literature Review: *Terapi Komplementer untuk Mengurangi Nyeri Persalinan di Berbagai Negara*. *Journal.Literasisains.Id*, 2(2), 413–424. <https://journal.literasisains.id/index.php/sehatmas/article/view/1408> [Diakses pada 6 Juni 2023]
- Choirunissa, R., Widowati, R., & Nabila, P. (2021). *Peningkatan Pengetahuan tentang Terapi Birth Ball untuk Pengurangan Rasa Nyeri Persalinan di Klinik P Kota Serang*. *Journal of Community Engagement in Health*, 4(1), 219–224. <https://jceh.org/index.php/JCEH/article/view/155> [Diakses pada 12 Juni 2023]
- Darmawan, E. W. N., Suprihatin, S., & Indrayani, T. (2022). *Pengaruh Aromaterapi Lavender terhadap Nyeri Persalinan Kala 1 Fase Aktif pada Ibu Bersalin di RS Lira Medika Karawang-Jawa Barat*. *Journal for Quality in Women's Health*, 5(1), 99–106. <https://doi.org/10.30994/jqwh.v5i1.141> [Diakses pada 19 Juni 2023]
- Ekawati & Norhapifah Hestri. (2020). *Pengaruh Hidroterapi Kompres Hangat terhadap Intensitas Nyeri Persalinan Kala 1 Fase Aktif*. *Jurnal Kesehatan*, 13, 086–09. <https://doi.org/http://dx.doi.org/10.35730/jk.v12i0.799> [Diakses pada 13 Juni 2023]
- Fitri Hastutining D. et.al. (2022). *Efektivitas Kompres Hangat Terhadap Penurunan Intensitas Nyeri Persalinan Kala I Fase Aktif*. *Peran Mikronutrisi Sebagai Upaya Pencegahan Covid-19*, 12(Januari), 75–82. <http://journal.stikeskendal.ac.id/index.php/PSKM> [Diakses pada 24 Juni 2023]
- Hariyanti, & Astuti, Y. L. (2021). *Antenatal Care Dan Komplikasi Persalinan Di Indonesia: Analisis Data Survei Demografi Dan Kesehatan Indonesia 2017*. *Journal of Midwifery Science and Women's Health*, 1(2), 77–83. <https://ejournal.poltekkesjakarta1.ac.id/index.php/bidan/article/download/255/107/1213> [Diakses pada 7 Juni 2023]
- Hatami Rad, R. (2021). *Effect of Aromatherapy with Lavender on Labor Pain: A Literature Review*. *Disease and Diagnosis*, 10(3), 123–128. <https://doi.org/10.34172/ddj.2021.23> [Diakses pada 4 Juni 2023]
- Irawati et al. (2019). *Pengaruh Pemberian Kompres Hangat Terhadap Penurunan Intensitas Nyeri Persalinan Kala I Fase Aktif*. *Journal of Nursing and Health*, 5(2), 74–83. <https://doi.org/10.52488/jnh.v5i2.120> [Diakses pada 19 Juni 2023]
- Juliani, W. Sanjaya, R., Veronica, S., & Ifayanti, H. (2020). *Pemberian Aromaterapi Lavender Terhadap Pengurangan Nyeri Persalinan Kala I Fase Aktif*. *Wellness And Healthy Magazine*, 2(2), 187–192. <https://wellness.journalpress.id/wellness/article/download/3222/pdf> [Diakses pada 12 Juni 2023]
- Karcioglu, O., Topacoglu, H., & Dikme, O. (2018). *A Systematic Review of The Pain Scales in Adults: Which to Use?* *American Journal of Emergency Medicine* 36, 707–714. <https://doi.org/10.1016/j.ajem.2018.01.008> [Accessed on 18 June 2023]
- Kemendes RI. (2022). *Profil Kesehatan Indonesia 2021*. In Pusdatin.Kemendes.Go.Id.
- Kholisoh, I., Winarni, L. M., & Afiyanti, Y. (2022). *Pengaruh Kompres Hangat Terhadap Intensitas Nyeri Persalinan Kala I Fase Aktif di Rumah Sakit Dinda Kota Tangerang*. *Journal of Nursing Practice and Education*, 3(01), 1–10. <https://doi.org/10.34305/jnpe.v3i01.551> [Diakses pada 19 Juni 2023]
- Nasifah, I., & Adawiyah, R. (2022). *Alternative Terapi Stimulasi Kulit dengan Nyeri Persalinan*. 1(2), 819–826. <https://callforpaper.unw.ac.id/index.php/semnasdancfpbidanunw/article/view/272/164> [Diakses pada 18 Juli 2023]
- Priadana et al. (2021). *Metode Penelitian Kuantitatif* (Issue 1). Pascal Books. <https://lemlit.unpas.ac.id/wp-content/uploads/2022/02/Metode-Penelitian-Kuantitatif.pdf> [Diakses pada 18 Juni 2023]
- Patimah, M., & Sundari, S. W. (2020). *Aromaterapi untuk mengurangi nyeri persalinan*. *Proceeding Book Health National Conference "Stunting Dan 8000 Hari Pertama Kehidupan,"* 45–48. https://repository.ummat.ac.id/1176/1/9_Meti_Fatimah_45-48.pdf [Diakses pada 27 Juli 2023]
- Rejeki, S. (2018). *Buku Ajar Manajemen Nyeri Dalam Proses Persalinan (Non Farmaka)* (U. Press

- (ed.). <http://repository.unimus.ac.id/id/eprint/5180> [Diakses pada 18 Juli 2023]
- RSUD Akhmad Berahim. (2022). *Laporan Tahunan Pelayanan Intalasi Kebidanan dan Penyakit Kandungan*.
- Sagita, Y. D., & Martina. (2019). *Pemberian Aromaterapi Terhadap Lavender untuk Menurunkan Intensitas Nyeri Persalinan*. *Wellness and Healthy Magazine*, 2(1), 151–156. <https://wellness.journalpress.id/wellness/article/view/v1i219wh> [Diakses pada 10 Juli 2023]
- Sari, P. N., & Riona Sanjaya. (2020). *Pengaruh Aromaterapi Lavender Terhadap Nyeri Persalinan*. *Majalah Kesehatan Indonesia*, 1(2), 51–56. [org/journals/1/makein/article/view/1209/10](https://www.majalahkesehatanindonesia.com/journals/1/makein/article/view/1209/10) [Diakses pada 14 Juli 2023]
- Seftianingtyas, W. N., Istiananingsih, Y., & Anggaraini, S. (2021). *Pengaruh Massage Effleurage Terhadap Tingkat Nyeri Ibu Bersalin Kala I Fase Aktif Di Kamar Bersalin Rumah Sakit Pupuk Kalimantan Timur Tahun 2021*. *Jurnal Antara Kebidanan*, 4(2), 76–83. [Diakses pada 12 Juni 2023]
- Tangkas, K. S., & Suarmini, K. A. (2020). *Pengaruh Kompetensi Asuhan Kebidanan Komplementer Massage Punggung Terhadap Intensitas Nyeri Ibu Bersalin*. *Midwinerslion : Jurnal Kesehatan STIKes Buleleng*, 5(2), 235. <https://ejournal.stikesbuleleng.ac.id/index.php/Midwinerslion/article/view/113/83> [Diakses pada 22 Juli 2023]
- Tempang Sanni, E. a. (2023). *Pengaruh Relaksasi Pernafasan Pada Tingkat Nyeri Ibu Primigravida dengan Inpartu Kala I Fase Aktif Di RS Soemarno Sosroatmodjo Tanjung Selor Provinsi Kalimantan Utara Tahun 2023*. 01(01), 525–533. <https://doi.org/https://doi.org/10.55681/aohj.v1i3.197> [Diakses pada 5 Oktober 2023]
- Wahyuningsih et al. (2022). *Perbedaan Efektivitas antara Masase dan Kompres Hangat dalam Menurunkan Nyeri Persalinan Kala I Fase Aktif*. *Jurnal Kebidanan : Jurnal Medical Science Ilmu Kesehatan Akademi Kebidanan Budi Mulia Palembang*, 12(1), 1–13. <https://doi.org/10.35325/kebidanan.v12i1.289> [Diakses pada 8 August 2023]
- Yuandira et al. (2021). *Penerapan Aroma Terapi Lavender Terhadap*. 4(1). <https://bemj.ejournal.id/BEMJ/article/download/38/34> [Diakses pada 25 Juli 2023]