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The effects of acupressure and back massage on reducing mother's pain during fisrt stage of labor at Pratama Hadijah Maternity Clinic

Annisa Namirah Nasution[1], Nopita Yanti Sitorus[2], Desi Handayani Lubis[3], Yaumil Fauziah[4], Maimunah R[5], Yulia Fatma Nasution[6]

[1,2,3,4,5,6]Program Sarjana Kebidanan dan Profesi Bidan, Sekolah Tinggi Ilmu Kesehatan Flora, Medan, Indonesia

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ABSTRACT

This study aims to analyze the effect of acupressure and back massage on reducing mother's pain during first stage of labor at Pratama Hadijah Maternity Clinic 2024. It was a quantitative research using experimental research design with non-equivalent control group design. The samples were 40 mothers who experiencing first stage of labor. They were selected by using accidental sampling. The data were collected by using NRS (Numeric Rating Scale) observation sheet. The data were analyzed by using unvaried and bivariate data analysis with Wilcoxon Test. The findings showed the level of pain before applying acupressure therapy majority about 18 respondents (90%) experienced moderate pain and after applying acupressure therapy majority 13 respondents (65%) experienced mild pain. Whereas about 16 respondents (80%) experienced moderate pain before applying acupressure therapy and about 12 respondents (60%) experienced moderate pain after applying back massage. There is an influence of acupressure therapy (p=0,001) and back massage (p=0,000<) on the reducing the level of mothers 'pain during the first stage of labor. It is concluded that there is an influence of acupressure therapy and back massage on reducing mother's pain during the first labor at Pratama Hadijah Maternity Clinic 2024. It is suggested to the clinic to apply acupressure therapy which is proven more effective and can be taught to pregnant woman, maternity, and family to reduce mothers 'pain during first stage of labor.

Corresponding Author:

Nopita Yanti Sitorus,
Program Sarjana Kebidanan dan Profesi Bidan,
Sekolah Tinggi Ilmu Kesehatan Flora,
Jl. Rajawali No.24, Sei Sikambing B, Kec. Medan Sunggal, Kota Medan, Sumatera Utara 20122, Indonesia
Email: nopistr27@gmail.com

INTRODUCTION

Labor pain is an emotional experience and involves physiological and psychological mechanisms during labor. This can be caused by uterine contractions, cervical dilation and thinning. The intensity of pain during childbirth will affect the psychological condition of the mother, the delivery process and the condition of the fetus. Excessive pain can make the mother rush into labor

and cause inflammation in the uterus and the absence of cervical dilation which can lead to labor dystocia. The management of labor pain consists of pharmacological and non-pharmacological treatment (E Retnosari et al., 2022).

If labor pain is not treated, it can cause an increase in maternal cardiac output and obstruction of peripheral blood vessels, causing uteroplacental perfusion to decrease. Pain in labor accompanied by anxiety and stress increases the release of gastrin and inhibits gastrointestinal motility and the urinary reflex, which will lead to an increase in stomach acid volume and delay in emptying the bladder. In addition, severe and unresolved labor pain can cause the mother to depression and negative thoughts regarding sexual intercourse and an increase in the demand for cesarean section (Tantri, Hanindito, & R, 2019).

A woman with pain during the first stage of labor, if she is not treated correctly, she will feel anxiety, fear, which can cause increased oxygen needs, muscle tension, because blood pressure increases catecholamine and it causes contractions. These results in prolonged phase I of labor and can cause inhibition of production due to increased production of the hormone progesterone inhibits, the onset of contractions so as to weaken the contractions of the mother's uterus and this situation results in prolonged phase I of labor (Taqiyah & Jama, 2021).

Based on data from the Maternal Perinatal Death Notification (MPDN), the Ministry of Health's maternal death recording system, the number of maternal deaths in 2022 reached 4,005 and it increased to 4,129 in 2023. Meanwhile, infant deaths in 2022 about 20,882 and in 2023 it were recorded about 29,945 (Ministry of Health, 2022)

The data center of the Indonesian Hospital Association explained that 15% of maternity mothers in Indonesia experienced childbirth complications and 21% stated that the childbirth experienced was a painful childbirth because they felt extreme pain, while 64% did not receive information about the preparation and planning that must be done to reduce pain in childbirth (Fitri et al., 2023)(Malita Sari & Ramadhani, 2020)(Suyani, 2020).

The pharmacological and non-pharmacological therapies have been used to reduce labor pain. The non-pharmacological methods are considered very helpful because they do not cause allergic or drug effects, do not cause delayed labor if given strong pain control, and do not have harmful side effects for the mother and fetus (MELY et al., 2023).

The pharmacologically painkiller method is with chemical drugs, we know that pharmacological methods often have side effects. Meanwhile, non-pharmacological methods are carried out naturally or without the use of chemical drugs, reducing pain and anxiety in the mother, increasing uterine perfusion, modifying contractions and releasing oxytocin which makes pain increase. Nonpharmacological methods can increase satisfaction during labor if the mother can control her feelings and fears (Hamdiah Ahmar, dkk, 2021)

Massage is one of the non-pharmacological ways to relieve labor pain. Since the body releases endorphins, natural analgesics, massages or small caresses during labor can make the mother comfortable and relaxed (Rahmi, 2021).

Acupressure is a puncture therapy using fingers which is a form of physiotherapy by providing stimulation at certain points or acupoints on the body (Rahayu et al., 2019). Acupressure can be done by medical personnel who are qualified in Complementary Therapy (acupressure), this acupressure is believed to relieve pain during contractions (Ayuningtyas, 2019). This acupressure has the effect of reducing pain at the opening of 3 to 10 cm (Alam, 2020).

Based on the results of an initial survey conducted by researchers at the Pratama Hadijah Clinic in 2024, the number of deliveries assisted by health workers was 154 mothers giving birth in 2023. In February 2024 there will be 9 total maternity births. 4 people with primigravida mothers and 5 people with multigravida mothers. In primigravida mothers, there were 4 mothers with controlled severe pain and 1 mother with uncontrolled severe pain, resulting in prolonged period of first stage of labor.

RESEARCH METHOD

This type of research is a quantitative research using Experimental. The research design used is a quasi-experimental design research design. This type of research design uses a nonequivalent control group design. This research was conducted at the Hadijah Pratama Maternity Clinic from January to August 2024.

The population of the study is 154 mothers who were experiencing the first stage of labor at the Hadijah Pratama Maternuty Clinic in the January-December 2023 period. The sample in this study were 40 mothers were experiencing first stage of labor that were divided into 2 groups, 20 mothers were experiencing the first stage of labor were given acupressure therapy and another 20 mothers were given back massage. The technique in sampling in this study is using accidental sampling.

The inclusion criteria are normal childbirth during the active phase I (cervical opening 4-10 cm), experiencing moderate and severe pain (NRS 3-10), willing to be a respondent. The exclusion criteria were decreased consciousness, mothers giving birth with complications such as CPD, fetal abnormalities and bleeding, were not willing to be respondents.

This study obtained two research variables; they are independent variable and dependent variable. The independent variable is acupressure therapy with back massage while the dependent variable is maternity during the first period. The data were analyzed by bivariate analysis using the T-Dependent test to determine the influence of independent variables (Acupressure Therapy and back massage) with dependent variables (maternal pain level in phase I). The data was analyzed using computerization with the SPPSS version 20.0 program.

RESULTS AND DISCUSSIONS

The results of the research which is conducted through the results of interviews and providing interventions aimed at determining the effect of acupressure therapy and back massage on the level of pain in women in the first period of childbirth at the Hadijah Pratama Maternity Clinic. The results of the research were obtained as follows:

Table 1. Frequency distribution of characteristics of maternity mothers during first stage of labor at Pratama Hadijah Maternity Clinic 2024

No	Characteristics	Acupressure Therapy Group		Back Massage Group	
		F	%	F	%
	Age				
1	<20 yo	2	10	3	15
2	20-35 yo	17	85	14	70
3	>35 yo	1	5	3	15
	Total	20	100	20	100
	Parity				
1	Primipara	2	10	10	50
2	Multipara	17	85	9	45
3	Grandemultipara	1	5	1	5
	Total	20	100	20	100
	Education				
1	University/Bachelor	6	30	5	25
2	Highschool/equivalent	14	70	15	75
	Total	20	100	20	100

Source: Primary Data Processed in 2024

Table 1 shows that the characteristics of the group given acupressure therapy based on age are mostly 20-35 years old, they are about 17 respondents (85%), based on parity most multipara about 17 respondents (85%) and based on education mostly graduated from high about 14 respondents (70%). The characteristics of the group that was given back massage based on the age

of mostly were 20-35 years old, about 14 respondents (70%), based on the parity of most primipara about 10 respondents (50%) and based on the education mostly graduated from high school/equivalent about 15 respondents (75%).

Table 2. Frequency distribution of maternity pain level before applying acupressure therapy on maternity mothers during fisrt stage at Pratama Hadijah Maternity Clinic 2024

No	Level of Pain during First Stage of Labor	Frequency (f)	Percentage (%)
1	Moderate	18	90
2	Severe	2	10
	Total	20	100

Source: Primary Data Processed in 2024

Based on table 2 above, it shows that the level of labor pain in the first period before acupressure therapy is mostly in the moderate pain about 18 respondents (90%).

Table 3. Frequency distribution of maternity pain level after applying acupressure therapy on maternity mothers during fisrt stage at Pratama Hadijah Maternity Clinic 2024

No	Level of Pain during First Stage of Labor	Frequency (f)	Percentage (%)
1	Mild	13	65
2	Moderate	7	35
	Total	20	100

Source: Primary Data Processed in 2024

Based on table 3 above, it shows that the level of labor pain in the first period after acupressure therapy is mostly in the mild category about 13 respondents (65%).

Table 4. The average of pain level before and after applying acupressure therapy on maternity mothers during first stage at Pratama Hadijah Maternity Clinic 2024

No	Average of Pain Level	N	Mean	SD	Min-Max CI 95%
1	Before Applying	20	5,5	0,827	4-7
2	After Applying		3,3	0,813	2-5

Source: Primary Data Processed in 2024

Based on table 4, the results show that the average level of labor pain in the first period before acupressure therapy is 5.5 with a standard deviation of 0.827 and confidence interval (4-7) and after acupressure therapy is given, the average level of labor pain decreases to 3.3 with a standard deviation of 0.813 and confidence interval (2-5).

Table 5. Frequency distribution of pain level during labor before applying back massage on maternity mothers during first stage of labor at Pratama Hadijah Maternity Clinic 2024

No	Level of pain	Frequency (f)	Percentage(%)
1	Moderate	16	80
2	Severe	4	20
	Total	20	100

Source: Primary Data Processed in 2024

Based on table 5 above, it shows that the level of labor pain in the first period before applying back massage is mostly in the moderate category about 16 respondents (80%).

Table 6. Frequency distribution of pain level during labor after applying back massage on maternity mothers during first stage of labor at Pratama Hadijah Maternity Clinic 2024

No	Level of Pain during First Stage of labor	Frequency (f)	Percentage (%)
1	Mild	8	40
2	Moderate	12	60

No	Level of Pain during First Stage of labor	Frequency (f)	Percentage (%)
	Total	20	100

Source: Primary Data Processed in 2024

Based on table 6 above, it shows that the level of labor pain in the first period after being given back massage is mostly in the moderate category about 12 respondents (60%).

Table 7. The average of pain level before and after applying back massage on maternity mothers during fisrt stage at Pratama Hadijah Maternity Clinic 2024

No	Average of Pain Level	N	Mean	SD	Min-Max CI 95%
1	Before Applying Back Massage	20	5,8	0,951	4-7
2	After Applying Back Massage		3,5	0,759	2-5

Source: Primary Data Processed in 2024

Based on table 7, the results of the study show that the average level of labor pain in the first period before being given back massage is 5.8 with a standard deviation of 0.951 and confidence interval (4-7) and after being given back massage, the average level of labor pain decreases to 3.5 with a standard deviation of 0.759 and confidence interval (2-5).

Table 8. Normality test result

No	Variabel	Sig	Information
1	Before Applying Acupressure Therapy	0,017	Abnormal
2	After Applying Acupressure Therapy	0,004	Abnormal
1	Before Applying Back Massage	0,016	Abnormal
2	After Applying Back Massage	0,002	Abnormal

Source: Primary Data Processed in 2024

Based on the results of the normality test on all variables, it showed an abnormal distribution ($p<0.05$) so that it could not be continued using the parametric test and continued using a non-parametric test, using the Wilcoxon Test.

Table 9. Homogeneity test results

Test of Homogeneity of Variances				
Pain Level				Information
Levene Statistic	df1	df2	Sig.	
.230	1	38	0.635	Homogen

Source: Primary Data Processed in 2024

Based on the table above, it is known that the data of both have a significance of > 0.05 so that the data have the same group variance or homogeneous.

Table 10. The effect of acupressure therapy on reducing birth pain levels during first stage of labor at Pratama Hadijah Maternity Clinic 2024

	Average (s.b)	Difference(s.b)	IK 95%	*p-value*
Birth Pain Before Acupressure Therapy	5,5 (0,83)	2,1 (0,87)	1,74 – 2,56	0,000
Birth Pain After Acupressure Therapy	3,3 (0,82)			

Source: Primary Data Processed in 2024

Based on table 10 above, it shows that the average level of labor pain before acupressure therapy is 5.5 and the level of labor pain after acupressure therapy decreases to 3.3 with an average difference of 2.1. The results of the T-Dependent test (Paired Sample T-Test) obtained a significant value (p-value) of 0.000 ($p<0.05$) so that it can be concluded that there is an effect of acupressure therapy on the level of labor pain in mothers during first stage of labor.

Table 11. The effect of back massage on reducing birth pain levels during first stage of labor at Pratama Hadijah Maternity Clinic 2024

	Average (s.b)	Difference(s.b)	IK 95%	*p-value*
Birth Pain Before Back Massage	5,8 (0,95)	2,2 (0,55)	1,99 – 2,51	0,000
Birth Pain After Back Massage	3,5 (0,76)			

Source: Primary Data Processed in 2024

Based on table 11 above, it shows that the average level of labor pain before back massage is 5.8 and the level of labor pain after back massage decreases to 3.5 with an average difference of 2.2. The results of the T-Dependent test (Paired Sample T-Test) obtained a significant value (p-value) of 0.000 ($p<0.05$) so that it can be concluded that there is an effect of back massage on the level of labor pain in mothers who give birth in the first stage of labor.

Discussion

Pain Levels Before Acupressure Therapy in Pregnant Women during First Stage of Labor

The results showed that the level of labor pain in the first stage before acupressure therapy was mostly in the moderate category about 18 respondents (90%) with an average pain level of 5.5 with a standard deviation of 0.827 and a confidence interval (4-7).

This research is in line with what was conducted by Natalia et al. (2024) regarding the effect of LI4 point acupressure on labor pain in pregnant women during the 1st active phase at the Aai-Cargill Primary Clinic. The results showed that the pain level in the intervention group before being given LI4 point acupressure therapy was at level 7 with the moderate category.

This research is also in line with what was conducted by (Rangkuti et al., 2023) regarding the effectiveness of acupressure massage on the reduction of labor pain at the Trimedika Bintara Clinic, Bekasi Barat. The results showed that the pain level of the maternity mother in the first phase of labor before acupressure massage was carried out with an average value of 6.4 with a moderate pain level.

Most mothers experience pain during childbirth, but the intensity of this pain is different for each mother. Pain is the most disliked and even feared condition, especially by pregnant women and mothers who are about to give birth. Fear is the main reason for pregnant women to choose childbirth by cesarean section without medical indications, but the demand of pregnant women who view cesarean section as a better alternative to normal childbirth. Pain in the first stage is severe pain with a longer time, for that it is necessary to pay attention to the treatment to overcome pain in the first stage of labor (Raana & Fan, 2020).

Labor pain can stimulate the release of chemical mediators such as prostaglandins, leukotrien, thromboxane, histamine, bradykinin, substance P, and serotonin, will result in stress that causes the secretion of hormones such as catecholamines and steroids with the result of vasoconstriction of blood vessels so that intestinal contractions are weakened. Excessive hormone secretion will cause disruption of the uteroplacental circulation so that fetal hypoxia occurs (Rejeki, 2020).

This study concluded that before the acupressure therapy intervention was given, the average pain level of women in the first trimester was 5.5 in the moderate category, where the pain experienced in labor was caused by uterine contractions, cervical dilation and at the end of the first trimester and in the second trimester by stretching the vagina and pelvic floor to accommodate the presentation part. Pain during childbirth in the first stage is caused by dilation and thinning of the cervix and uterine ischemia, this is due to a decrease in blood flow so that oxygen is deficit due to contraction of the myometrium artery, which is called visceral pain.

Pain Levels after Acupressure Therapy in Pregnant Women During First Stage of Labor

The results showed that the level of labor pain in the first period after acupressure therapy was mostly in the mild category as many as 13 respondents (65%) with the average level of labor pain decreasing to 3.3 with a standard deviation of 0.813 and confidence interval (2-5).

This study is in line with what was conducted by Natalia et al. (2024) regarding the effect of LI4 point acupressure on labor pain in pregnant women during the 1st active phase at the Aai-Cargill Primary Clinic, Ketapang, Kalimantan Barat. The results showed that the pain level in the LI4 point acupressure intervention group experienced a decrease in the mean value from level 5 to level 3.92. In the observation sheet, there was a decrease in the maximum value from pain level 7 to the lowest pain level of 6 and a decrease in the highest pain level of 1.

This study is also in line with what was conducted by Rangkuti et al. (2023) regarding the effectiveness of acupressure massage on the reduction of labor pain at the Trimedika Bintara Clinic, West Bekasi. The results showed that the pain level of maternity in the first phase of labor before acupressure massage was carried out with an average value of 6.40 and after acupressure massage the pain level decreased with an average value of 4.33.

Most mothers experience pain during childbirth, but the intensity of this pain is different for each mother. Pain is the most disliked and even feared condition, especially by pregnant women and mothers who are about to give birth. Fear is the main reason for pregnant women to choose childbirth by cesarean section without medical indications, but the demand of pregnant women who view cesarean section as a better alternative to normal childbirth. Pain in the first stage is severe pain with a longer duration, for this reason it is necessary to pay attention to treatment to overcome pain in the first stage of labor (Raana and Fan, 2020).

Touch and massage, will help mothers relax, one of which can be done SP6 acupressure to stimulate the body to release endorphine compounds which are natural pain relievers. By stimulating specific points along the meridians, which are transmitted through large nerve fibers to the reticularis formation, the body's thalamus and limbic system release endorphins. Endorphins are painkillers that are naturally produced in the body, have a positive effect on emotions, can cause relaxation and normalization of body functions and part of the release of endorphins will lower blood pressure and improve blood circulation (Lubis et al., 2020).

The researcher of the study concluded that there was a decrease in pain levels in women giving birth at stage 1 where before acupressure therapy most of the respondents had moderate pain levels and after acupressure therapy most respondents had mild pain levels. This happens because when the study was carried out, most of the mothers who gave birth seemed comfortable and relaxed. However, there are some mothers who have been acupressured SP6 but still experience moderate pain, this is because the pain felt by a person is personal and unique, where each individual is different and cannot be equated even though they have the same condition, perception factors or tolerance for different pain. In addition, it is also due to the factor of bad experience of childbirth in the past, so that it adds anxiety which ultimately increases pain.

Pain Level Before Applying Back Massage Therapy to Mothers during First Stage of Labor

The results showed that the level of labor pain in the first period before back massage was mostly in the moderate category, as many as 16 respondents (80%), the average pain level was 5.8 with a standard deviation of 0.951 and confidence interval (4-7).

This research is in line with what was conducted by Lubis et al. (2020) regarding the effectiveness of back massage in reducing labor pain during the first active phase. The results showed that before the back massage intervention was given, the level of labor pain was 1.13.

This research is also in line with what was conducted by Rejeki et al. (2022) regarding the effect of back massage on the intensity of labor pain in phase I. Based on the results of the average pain score, the results of the univariate analysis showed that there was a decrease in the average pain score, where the pre-test back massage had an average of 6.23.

Childbirth in the 1st active phase is the most tiring and heavy process, and most mothers also experience intense pain because uterine activity begins to be more active. Physiological muscle contractions in childbirth are uterine contractions that actually cause pain in the body, and are commonly called involuntary contractions because they are under the influence of intrinsic nerves. This pain can be reduced by doing a massage on the back which has a very good effect on the mother to overcome labor pain (Izzati & Nurchasanah, 2023).

Pain in the process of childbirth is fundamentally different from the pain experienced by individuals in general. The difference lies in the fact that labor pain is a physiological process, women can know that they will experience pain during childbirth so that it can be anticipated, sufficient knowledge about the labor process will help women to overcome intermittent (periodic) labor pain, women's concentration on the baby to be born will make them more tolerant of the pain felt during childbirth (Rejeki and Irawan, 2020).

Researchers concluded that the level of labor pain before being given back massage therapy was average in the moderate category, during labor, myometrium contractions can be painful. Labor pain is an unpleasant process that occurs during labor, pain is one of the natural defense mechanisms that is a warning about the danger of pregnancy, discomfort indicates that the woman is experiencing uterine contractions, while many new approaches can minimize pain such as back massage therapy (Rejeki and Irawan, 2020).

Pain Level Applying Applying Back Massage Therapy to Mothers during First Stage of Labor

The results of the study showed that after being given back massage, most of them were in the moderate category as many as 12 respondents (60%) with the average level of labor pain decreasing to 3.5 with a standard deviation of 0.759 and confidence interval (2-5).

This study is in line with what was conducted by Lubis et al. (2020) regarding the effectiveness of back massage in reducing labor pain during the first active phase. The results showed that the back massage intervention given to primigravida maternity mothers during the first active phase could reduce the level of labor pain by 0.25, from 1.13 (before the intervention) to 0.88 (after the intervention).

This study is also in line with what was conducted by Rejeki et al. (2022) regarding the effect of back massage on the intensity of labor pain in phase I. Based on the results of the average pain score, the results of the univariate analysis showed that there was a decrease in the average pain score, where the pre-test back massage had an average of 6.23 while the post test of back massage was 5.14 with an average difference of 1.09.

Childbirth in the 1st active phase is the most tiring and heavy process, and most mothers also experience intense pain because uterine activity begins to be more active. Physiological muscle contractions in childbirth are uterine contractions that actually cause pain in the body, and are commonly called involuntary contractions because they are under the influence of intrinsic nerves. This pain can be reduced by doing a massage on the back which has a very good effect on the mother to overcome labor pain (Izzati and Nurchasanah, 2023).

Back massage is one of the non-pharmacological methods that can be done to reduce pain in childbirth. The back massage technique is an emphasis on the sacrum that can reduce tension in the sarcoiliacus joint from the posterior occipital position of the fetus Gentle massage or rubbing can make the mother feel comfortable and relaxed during childbirth caused by the body releasing endorphin hormones that can create a feeling of comfort, endorphins are also natural pain relievers (Anisa et al., 2023).

The researcher of the study concluded that there was a decrease in pain levels in women giving birth at first stage where before back massage therapy was carried out most of the respondents had moderate pain levels and after being given back massage therapy most of the respondents had mild pain levels. Back massage is done to help relax and reduce pain through increasing blood flow to the affected areas, stimulating skin tactile receptors so as to relax the muscles, changing skin temperature and generally providing a comfortable feeling related to the

closeness of human relationships so that it can reduce pain and provide a feeling of relaxation to the mother during the first stage of labor.

The Effect of Acupressure Therapy on Reducing Birth Pain Levels during First Stage of labor

The results showed that the average level of labor pain before acupressure therapy was 5.5 and the level of labor pain after acupressure therapy decreased to 3.3 with an average difference of 2.1. The results of the T-Dependent test (Paired Sample T-Test) obtained a significant value (p-value) of 0.000 ($p<0.05$) so that it can be concluded that there is an effect of acupressure therapy on the level of labor pain in mothers during first stage of labor.

This research is in line with that conducted by Angelia and Lokawati (2020) regarding the effect of acupressure in reducing labor pain during active phase 1 in Primigravida at BPM Ngadilah, – Malang. The results showed that there was an effect of acupressure in reducing labor pain during the 1st active phase with a value of $p=0.003$.

This study is also in line with that conducted by Hutabarat et al. (2022) regarding the effect of acupressure massage techniques on reducing pain intensity in phase I of the active phase of labor at the Korbafo Health Center in 2022. The results showed that there was an effect of acupressure therapy on reducing pain intensity in phase I of the active phase of labor with a value of $p= 0.004$.

Labor pain can be overcome by providing stimulus, including by administering acupressure therapy. Acupressure, like acupuncture, is a therapy that emphasizes certain points in the body that are believed to be able to overcome discomfort during pregnancy and when experiencing contractions before childbirth. Acupressure provides a sense of comfort during labor or relaxation. In addition, it is also to increase the intensification of contractions themselves. Acupressure is also widely used to stimulate contractions or encourage the progress of contractions so that opening occurs faster and the mother feels comfortable during the delivery process (Sunarto, 2021).

The administration of SP6 acupressure carried out at the SP6 Point, also known as san yin jiao, is a channel that runs dermatomic L2 and L1 then to T12 and T5. The sympathetic nerve of uterine control through the pelvic plexus receives preganglionic fibers out from T5 to T4 so that stimulation at this acupressure point can change the physiological function of the uterus. The location of the SP6 point is 3 cun (4 fingers) above the inner ankle, massaged in a clockwise direction. Stimulation at this point can increase the concentration of yin energy that can be retracted from starting work. The effects of Yin energy acupressure bias increase uterine contractions as it has been shown to increase the hormone oxytocin. During childbirth, there is a blockage of the meridians which causes the flow of meridians to be blocked through the body. The stimulus at the SP 6 or LI4 point can open the blockage and facilitate the meridians to flow. It also makes mothers calmer during childbirth. Stimulus at this point can also increase the hormone oxytocin from the pituitary gland which leads to an increase in uterine contractions during labor. SP6 acupressure stimulates the body to release endorphine compounds which are natural pain relievers. Endorphines also create a feeling of comfort and deliciousness (Ariesty dkk, 2021).

The researcher of the study concluded that there is an effect of acupressure therapy on the level of pain in women who give birth in the first trimester. Nerve tissue will provide stimulation to the endocrine system to release endorphins as needed by the body and is expected to reduce pain during childbirth. Acupressure also has advantages or advantages compared to other techniques or methods. Acupressure is very practical because it does not require many tools and is enough with fingers, thumb, index finger, palm and is cheap and safe.

The Effect of Back Massage on Reducing Birth Pain Levels during First Stage of labor

The results showed that the average level of labor pain before back massage was 5.8 and the level of labor pain after back massage decreased to 3.5 with an average difference of 2.2. The results of the T-Dependent test (Paired Sample T-Test) obtained a significant value (p-value) of

0.000 (p<0.05) so that it can be concluded that there is an effect of back massage on the level of labor pain in mothers during first stage of labor.

This study is in line with that carried out by back massage on the reduction of physiological labor pain during the 1st active phase. The results of the study showed that there was a significant difference in the level of pain in mothers who were about to give birth in phase 1 of the active phase before and after being given back massage with a value of p = 0.000.

This study is also in line with what was carried out by (Elfiana & Manurung, 2023) regarding the effect of back massage on reducing the level of labor pain during the first active phase at the UPTD Maga Health Center, Mandailing Natal in 2022. The results showed that there was an effect of back massage on the reduction of labor pain during the first active phase with a value of p= 0.011.

Back massage is one of the innovative techniques for pain management by massaging the back for 10-15 minutes. Swiping with lotion, balm or moisturizer will provide warmth and dilatation in local blood vessels. Vasodilation of blood vessels will optimize blood circulation in the massage area resulting in increased cell activity. Optimizing cell activity will reduce pain and support the healing process. Massage is able to induce physical and mental relaxation, minimize pain and improve the work system of the treatment carried out (Kairani dan Linda, 2021).

Massage performed in the back area is a very important aspect for pain reduction. In the spinal region, there are various very important nerves that control the main functions of the body. When the body feels tired like during childbirth, the muscles around the spine will feel very stiff, hard and tight so that it is difficult to relax and feel comfortable which will eventually interfere with nerve function. The Massage method can result in a reduction in pain. Massage has a positive effect on the level of pain in childbirth mothers. This condition can help the smooth delivery process and the occurrence of labor complications (Rejeki dan Irawan, 2020).

Massage on the back stimulates a specific point along the meridian of the spinal medulla which is transmitted through large nerve fibers to the reticular formatio, the thalamus and the limbic system of the body releases endorphins. Endorphins are neurotransmitters or neuro modulators that inhibit the delivery of pain stimuli by attaching to the Opiet receptors on the nerves and spinal cord so that they can block pain messages to the higher centers and can reduce the sensation of pain. The massage mechanism uses the theory of controlling the gate of pain information which depends on the balance of severity in nerve fibers of large and small diameters along the spinal columna which can inhibit the transmission of pain to the brain (Fitria, 2019).

The researcher of the study concluded that there was an effect of back massage therapy on the level of pain in women in the first period of childbirth, as evidenced by a decrease in pain levels before and after back massage therapy. Touch relaxation may help you relax by touching or rubbing your back. Gentle massage will help you feel fresher, relaxed, and comfortable during childbirth. Massage stimulates the body to release endorphin compounds which are natural pain relievers. Endorphins can also create a feeling of comfort and deliciousness.

CONCLUSION

The majority of pain levels in the first stage of labor before acupressure therapy was given were in the moderate category. The majority of pain levels in the first stage of labor after being given acupressure therapy are in the mild category. The majority of pain levels in the first stage of labor before being given back massage therapy were in the moderate category. The majority of pain levels in the first stage of labor after being given a back massage are in the moderate category. There is an effect of acupressure therapy on the level of labor pain in mothers in the first stage of labor. There is an influence of back massage on the level of labor pain in mothers in the first stage of labor.

References

Alam, H. S. (2020). *Upaya Mengurangi Nyeri Persalinan dengan Metode Akupresur*. Media Sains Indonesia.

Anisa, F. N., Palimbo, A., & Maolinda, W. (2023). EFFECT OF WARM COMPRESS AND BREATHING TECHNIQUE ON DURATION OF THE SECOND STAGE OF LABOR. *Health Sciences International Journal*, *1*(1), 16–23.

Annisa, dkk. (2017). *Asuhan Persalinan Normal & Bayi Baru Lahir.* Yogyakarta: ANDI.

Ayuningtyas, I. F. (2019). *Kebidanan Komplementer Terapi Komplementer dalam Kebidanan.* Yogyakarta: PT Pustaka Baru.

Dyah et al. (2018). *Buku Nyeri Persalinan.* Mojokerto: Stikes Majapahit.

Elfiana, E., & Manurung, B. (2023). Pengaruh Massase Punggung Terhadap Penurunan Skala Nyeri Persalinan Kala I Fase Aktif Di UPTD Puskesmas Maga Kab. Mandailing Natal Tahun 2022. *Jurnal Rumpun Ilmu Kesehatan*, *3*(1), 6–12.

Fitria. (2019). *Kebidanan Komplementer*.Yogyakarta: Pustaka Baru Perss.

Fitri, D. H., Umarianti, T., & Wijayanti, W. (2023). Efektivitas Kompres Hangat terhadap Penurunan Intensitas Nyeri Persalinan Kala I Fase Aktif. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, *13*(4), 1189–1200.

Hutabarat dan Natalia. (2022). Pengaruh Teknik Pijat Akupresur Terhadap Penurunan Intensitas Nyeri Pada Kala I Fase Aktif Persalinan Di Puskesmas Korbafo Tahun 2022. *Jurnal Penelitian Kebidanan*. 5(1).

Izzati, N., & Nurchasanah, Y. (2023). PENGARUH PIJAT PUNGGUNG TERHADAP PENURUNAN NYERI PERSALINAN: EVIDENCE BASED CASE REPORT. *Jurnal Kesehatan Siliwangi*, *3*(3), 409–419.

Kairani, Linda dan Nova Linda. (2021). Pengaruh Masase Punggung Terhadap Pengurangan Nyeri Persalinan: A Systematic Review. *Jurnal Ilmiah Kebidanan Imelda.* 7(2), 47–52.

Kementerian Kesehatan. (2015). *Panduan Akupresur Mandiri.* Jakarta: Bakti husada.

Kemenkes RI. (2021). *Petunjuk Praktis Asuhan Mandiri Pemanfaatan Toga dan Akupresur (Buku Saku).* Jakarta: Kementrian Kesehatan RI https://sehatnegeriku.kemkes.go.id.

Legina, Anggraeni. (2023). *Buku Pelayanan Kebidanan Komplementer.* Bandung: Hairil Akbar.

Lokawati. (2020). Pengaruh Akupresur Dalam Mengurangi Nyeri Persalinan Kala 1 Fase Aktif Pada Primigravida Di BPM Ngadilah Kecamatan Pakis – Malang. *Jurnal Ilmiah Kesehatan Media Husada*.

Lubis, D. R., Maryuni, M., & Anggraeni, L. (2020). Efektivitas Massage Punggung Dalam Mengurangi Nyeri Persalinan Kala I Fase Aktif Pada Primigravida & Multigravida. *Jurnal Ilmiah Bidan*, *5*(1), 11–21.

MELY, P., SUSANTI, E. V. A., & FEBRINA, L. (2023). PENGARUH DEEP BACK MASSAGE TEKNIK FRICTION TERHADAP NYERI PERSALINAN KALA I FASE AKTIF DI WILAYAH KERJA PUSKESMAS TERAWAS KABUPATEN MUSI RAWAS TAHUN 2023. *Journal Of Midwifery*, *11*(2), 331–338.

Natalia, Nurhayati dan Khoerunnisa. (2024). Akupresure Titik Li 4 Berpengaruh Terhadap Nyeri Persalinan Pada Ibu Bersalin Kala1 Fase Aktif Diklinik Pratama Aai-Cargill, Ketapang Kalbar. *Jurnal Penelitian Pendidikan Bidan*. 2(1).

Nurfazriah dan Utami. (2022). Pengaruh Terapi Relaksasi *Akupresur* (Genggam Jari) Terhadap Nyeri Persalinan Kala I Aktif. *Jurnal Universitas Muhammadiyah Tasikmalaya*. 4(1).

Othman, S., Aly, S., & Mady, M. (2019). Effect of Acupressure on Dysmenorrhea Among Adolescents. *Journal of Medicine in Scientific Research,* 2(1), 24.

Raana, H. N., & Fan, X.-N. (2020). The effect of acupressure on pain reduction during first stage of labour: A systematic review and meta-analysis. *Complementary Therapies in Clinical Practice*, *39*, 101126.

Rahayu, N. P. M., Citrawati, N. K., & Juliawan, D. G. (2019). Hubungan kualitas pelayanan antenatal dengan tingkat kepuasan ibu hamil. *Journal Center of Research Publication in Midwifery and Nursing*, *3*(1), 21–27.

Rahmi, D. (2021). Penerapan Deep Back Massage Terhadap Pengurangan Nyeri Persalinan Kala 1. *Jurnal Ilmiah Kesehatan*.

Rangkuti, M. S., Siauta, J. A., & Suprihatin, S. (2023). Efektivitas Pijat Akupresure Terhadap Pengurangan Nyeri Persalinan Di Klinik Trimedika Bintara Bekasi Barat. *An-Nadaa: Jurnal Kesehatan Masyarakat (e-Journal)*, *10*(2), 195–198.

Rejeki, S. (2020). *Buku Ajar Manajemen Nyeri Dalam Proses Persalinan (Non Farmaka)*. Unimus Press.

Sunarto, C. E. A. (2021). Terapi Akupresur terhadap Intensitas Nyeri Persalinan Kala I. *Call For Paper Seminar Nasional Kebidanan*, 18–26.