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The Effect of Acupressure Therapy on Lower Back Pain in Third Trimester Pregnant Women at the Marbau Health Center Uptd in 2022

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ABSTRACT

The maternal mortality rate is an indicator to assess the success of achievements in maternal health efforts. One of the efforts to reduce maternal mortality is antenatal care services, which are examinations in pregnancy that aim to improve the health of pregnant women, both physically and mentally optimally, as well as restore the health of the reproductive organs. This study aims to see whether there is an effect of acupressure therapy on lower back pain in third trimester pregnant women at the UPTD Puskesmas Marbau in 2022. This research is a non-experimental correlative descriptive study. The population in this study were all third trimester pregnant women who visited the UPTD Langsa Barat Health Center, totaling 47 pregnant women. The sampling technique was carried out using the Accidental Sampling technique so that the total sample was 31 people. Data analysis used the Wilcoxon test. The results of this study indicate that from the results of the questionnaire the average pain intensity experienced by respondents before being given acupressure therapy was 5.48, after being given acupressure therapy was 3.65. The results of data analysis showed a value of P = 0.03, where 0.03 <0.05. This shows that there is an effect of acupressure therapy on lower back pain in third trimester pregnant women. It was concluded that the effect of acupressure therapy on lower back pain in third trimester pregnant women at the Marbau Health Center UPTD in 2022. So Ho was rejected and Ha was accepted.

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INTRODUCTION

Pregnancy and childbirth are natural processes and not pathological processes. The gestation period starts from conception to the birth of the fetus, the normal duration of pregnancy is 280 days (40 weeks or 9 months 7 days) counting from the first day of the last menstruation. Pregnancy is divided into 3 quarters, namely the first quarter starting from conception to 3 months, the second

quarter from the fourth month to 6 months and the third quarter from the seventh month to 9 months (Saifuddin, 2019).

Pregnancy is a period in life associated with anatomical changes, physiological adaptation, psychological adaptation, and social. Anatomical changes and physiological adaptations to pregnancy aim to prepare the body of pregnant women for labor and lactation. Changes and adaptations that occur during pregnancy will generally cause discomfort to pregnant women, discomfort that is often a complaint for pregnant women including nausea and vomiting in early pregnancy, constipation, varicose veins, and swelling of the legs and feet and back pain. , NT, 2018).

Low back pain in pregnancy is described as pain in the lumbar region, above the sacrum and this pain can radiate to the legs, the pain is often dull in nature and is exacerbated by flexion of the lumbar spine anteriorly (Carvalho, 2017). India states that the prevalence of lower back pain in third trimester pregnant women is 33.7%, occurring in 261 pregnant women. The results of research on low back pain in pregnant women in Indonesia and in Bali have not been confirmed. The prevalence of low back pain in Indonesia is 18%. The prevalence of Low Back Pain (LBP) increases with age and is most common in the middle and early four decades (Ramachandra, 2017).

Ulfah (2017) found 58.1% of pregnant women complained of back pain with details of moderate pain (29.0%), mild pain (22.6%) and severe pain (6.5%). Further research was conducted by Permatasari (2019) on pregnant women who experienced low back pain, 73.33% experienced moderate pain, while those who experienced mild pain (10%) and severe pain (16.67%). The cause of low back pain from a biomedical point of view is due to the displacement of the center of gravity forward, the gravitational pressure of the uterus on the great vessels reduces blood flow to the spine and causes back pain, especially in late pregnancy. Joint looseness caused by an increase in the hormone relaxin which gradually increases and persists in late pregnancy is considered one of the etiologies of low back pain and hip pain in pregnant patients (Shannon M. C, 2019).

The prognosis for low back pain will be bad if it is not handled properly. Pregnant women who experience low back pain will find it difficult to stand, sit and even move from bed, this causes disruption of their daily routine and affects their quality of life. The impact is difficulty walking if the pain has spread to the pelvic and lumbar areas, with various impacts that can occur, the problem of lower back pain in pregnant women must be treated (Aswitami, 2018).

Handling low back pain during pregnancy is very necessary to reduce this discomfort, including pharmacological and non-pharmacological therapy. There are side effects when using pharmacological therapy for pregnant women, because the use of analgesics is not always effective in reducing low back pain, the use of non-steroidal anti-inflammatory drugs should not be used in infants under 30 weeks of gestation, because of the risk of causing malformations in the process of fetal formation. 2018).

Given the impact caused by the pharmacological therapy, non-pharmacological therapy needs to be carried out to reduce complaints of low back pain experienced by third trimester pregnant women which include constant stimulation (massage, hot and cold applications, acupressure, contralateral stimulation), Transcutaneous Electrical Nerve Stimulation (TENS).), acupuncture, relaxation, imagination, meditation, hypnosis, aromatherapy, yoga and reflexology (Official, 2017). Acupressure is a healing method that uses finger pressure techniques on acupuncture points as a substitute for needle sticking in the acupuncture healing system. The BL 23 point called shenshu located 1.5 cun lateral to the second lumbar vertebra (L 2) can reduce the level of back pain. Emphasis is applied for two seconds, 30 times, twice a week for one week to relieve back pain (Fitrina, 2019).

The results of research conducted by Official (2017) on the effect of acupressure on low back pain in pregnant women show that there is an effect of acupressure on back pain in pregnant women. Acupressure massage on point. Bladder 23 (BL 23), GV 3 and GV 4 can reduce muscle

tension, improve blood flow and stimulate the release of endorphins so that it has an effect on reducing pain so that it is effective in reducing the intensity of low back pain in pregnant women.

Based on the results of Permatasari's research (2019) on 22 third trimester pregnant women, the average back pain score after receiving the intervention changed from initially 4.27 before the intervention to 2.13 after the intervention. The results of the analysis in the acupressure group obtained a p value of 0.001, meaning that there were differences in complaints of low back pain before and after the intervention was given. One of the pain relief therapies is acupressure, namely by increasing the hormone endorphins after massage at certain points. Based on the initial survey of researchers at the Marbau Health Center UPTD through direct interviews with 7 third trimester pregnant women, it was found that 5 pregnant women complained of back pain and did not know the actions to reduce the pain they experienced,

RESEARCH METHOD

Types of research

The type of research used in this study is a type of Pre-experimental design, namely a research that carries out activities because this is not yet a serious experiment, because there are still external variables that influence the formation of the dependent variable and are not solely influenced by the independent variables. This can happen, because there is no control variable, and the sample is not chosen randomly (Sudiyono, 2017).

Research design

The research design is all about planning to answer the research questions and anticipating some of the possible difficulties that may arise during the research. This study used a one group pretest and posttest design without a control group, the subject group was observed before the intervention was carried out, then observed again after the intervention. One group before being given a certain treatment was given a pretest, then after being given treatment, measurements were taken again to find out the cause and effect of the treatment. Causal testing is done by comparing the results of the pretest with the post test.

Research Location and Time

a. Research sites

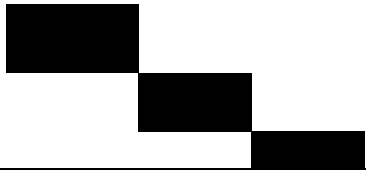
The location of this research was carried out at the UPTD of the Marbau Health Center, with several considerations, namely the large number of third trimester pregnant women who experience lower back pain, no research has been conducted on the administration of acupressure therapy to reduce pain, the number of population and samples suitable to be used as research subjects, and the location of the health center is a place that is easily accessible to researchers, making it easier for researchers to provide acupressure therapy as an effort to determine the effect of acupressure therapy on lower back pain in third trimester pregnant women.

b. Research time

This research was conducted from July to November 2022, starting from submission of titles, literature searches, proposal guidance, proposal seminars, data collection, data analysis to research results seminars.

Tab1e 1. Research Poa (Plan Of Action)

No	Information	July	August	Sept	Oct	Nov
1	Acc title					
2	Preliminary research survey					
3	Making Chapter 1- Chapter 3					
4	proposal seminars					

5	Deliver research letter	
6	Conduct research	
7	Create Chapters 4-Chapters 5	
8	Research Results Assembly	

Population and Sample

a. Population
   Population is an area consisting of: objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn (Sugiyono, 2017). The population in this study were all pregnant women who visited the Marbau Health Center, totaling 56 pregnant women.
b. Sample
   The sample is part of the number and characteristics possessed by the population (Sugiyono, 2017). The sampling technique was carried out using a purposive sampling technique, namely a sampling technique with certain conditions or considerations as desired by the researcher. The criteria set by the researcher on the respondents who became the sample of this study were.
   a) Third trimester pregnant women who experience low back pain
   b) Do not take pharmacological drugs and other drugs during pain other than the acupressure therapy given by the researcher
   c) Willing to be a respondent.

   Then the sample was taken according to the inclusion criteria that have been set in this study, namely 31 pregnant women.

Data collection technique

The research will be carried out with the following research data collection procedures:

a. Asking permission from the local administrator where the research will be carried out as well as providing an explanation of the aims and objectives of the research.
b. Placing the people under study not as objects but people who are equal to the researcher.
c. Respect, respect and obey all rules, norms, community values, beliefs, customs and cultures that live in the community where the research is carried out.
d. Hold all confidentiality related to the information provided.
e. Information about the subject is not published if the subject does not wish, including the name of the subject will not be included in the research report.
f. In recruiting research participation, you must first provide an Informed Consent, which is to honestly tell the aims and objectives related to the research objectives in the sample as clearly as possible.
g. During and after the research (privacy) is maintained, all participants are treated equally and the name of the participation is replaced with a number (anomity).
h. During data collection, the researcher provided comfort to the participants by taking the place of the interview according to the wishes of the participants, so that the participants could be free without any environmental influences to express the problems they were experiencing (Saryono, 2016).

RESULTS AND DISCUSSIONS

Demographic Data

Tab1e 2. Demographic Data of Low Back Pain in Trimester Pregnant Women III In UPTD Marbau Health Center in 2022

No	Characteristics of Respondents	N amount	Percentage (%)
1	Age		
	17-25	6	19.4
	26-35	21	67.7
	36-45	4	12.9
	Amount	31	100
2	Education		
	JUNIOR HIGH SCHOOL	8	25,8
	SENIOR HIGH SCHOOL	15	48.4
	S1	8	25,8
	Amount	31	100
3	Work		
	IRT	18	58,1
	Trader	3	9,7
	Self-employed	8	25,8
	civil servant	2	6.5
	Total	31	100

Based on table 4.1 above, it is known that the majority of respondents are aged 26-35 years as many as 21 people (67.7%), the majority of respondents' education is high school education as many as 15 people (48.4%) and the majority of respondents work as IRT as many as 18 people (58.1%).

Univariate analysis

Table1 3. Frequency Distribution of Lower Back Pain in Third Trimester Pregnant Women Before Being Given Acupressure Therapy at UPTD Health Center Marbau in 2022

No	Lower Back Pain	Frequency	Percentage (%)
1	No Pain	0	0
2	Mild Pain	6	19.4
3	Moderate Pain	16	51,6
4	Controlled Severe Pain	9	29.0
5	Uncontrollable Severe Pain	0	0
	Amount	**31**	**100**

Based on the table above, it can be observed that the third trimester pregnant women before being given acupressure therapy the majority of respondents experienced moderate pain as many as 16 respondents (51.6%).

Table1 4. Frequency Distribution of Lower Back Pain in Third Trimester Pregnant Women After Being Given Acupressure Therapy at UPTD Puskesmas Marbau in 2022

No	Lower Back Pain	Frequency	Percentage (%)
1	No Pain	0	0
2	Mild Pain	18	58,1
3	Moderate Pain	10	32,3
4	Controlled Severe Pain	3	9,7
5	Uncontrollable Severe Pain	0	0
	Amount	**31**	**100**

Based on the table above, it can be observed that the third trimester pregnant women after being given acupressure therapy, the majority of respondents experienced mild pain as many as 18 respondents (51.6%).

Tab1 5. Distribution of Respondents' Lower Back Pain Intensity Before and After being given acupressure therapy at the Marbau Health Center UPTD in 2022

	Mean	N	Min-Max
Pain intensity before acupressure therapy	5.48	31	3-8
Pain intensity after given acupressure therapy	3.65	31	1-7

Based on the table above, it can be observed that the average pain intensity experienced by respondents before being given acupressure therapy was 5.48 with the lowest pain level being on a pain scale of 3 and the highest being a pain scale of 8. The average pain intensity after being given acupressure therapy was 3.65. with the lowest level of pain, namely the pain scale of 1 and the highest, namely the pain scale of 7.

Bivariate Analysis

Bivariate analysis was used to see a decrease in the intensity of menstrual pain in respondents who were given acupressure therapy. The research results are said to be effective if the p Value = 0.002 with $\alpha \leq 0.005$.

Table1 6. Wilcoxon Test on Respondents Given Therapy Acupressure at UPTD Marbau Health Center in 2022

Respondents	Pretest	Postest	Z	P
31	31	31	-2,999a	003

Based on table 5 above, the Wilcoxon test results obtained a Z value of -2.999a with p = 0.003 <0.05 so Ho is rejected and Ha is accepted, which means that there is a significant difference between the pretest and post-test groups. These results show that there is an effect of acupressure therapy on lower back pain in third trimester pregnant women at the UPTD Marbau Health Center in 2022.

Discussion

a. Lower Back Pain in Third Trimester Pregnant Women Before Being Given Acupressure Therapy at UPTD Health Center Marbau in 2022

Based on the results of the research from the observation sheet conducted on third trimester pregnant women before being given acupressure therapy at the Marbau Health Center UPTD in 2022, data were obtained from the observation sheet that the majority of respondents before being given acupressure therapy experienced moderate lower back pain. This is evidenced by the results of observations in third trimester pregnant women who experience lower back pain that makes them experience difficulties in carrying out activities such as standing after sitting, moving from bed, sitting too long, standing too long, undressing and undressing. as well as lifting and moving objects around.

Low back pain will sometimes radiate to the pelvis, thighs and down the legs, sometimes increasing tenderness above the symphysis pubis. Non-pharmacological therapy needs to be done to reduce complaints of low back pain experienced by pregnant women in the third trimester which includes continuous stimulation such as acupressure therapy. Acupressure is the development of massage therapy that goes hand in hand with the development of acupuncture because the acupressure massage technique is a derivative of acupuncture (Hartono, 2018).

Menstrual pain or dysmenorrhea occurs due to an increase in prostaglandin (PG)F2α which is a cyclooxygenase (COX-2) which results in hypertonicity and vasoconstriction in the myometrium resulting in a decrease in blood flow and oxygen to the uterus and will result in ischemia resulting in a response from the noriceptors because there is a strong stimulus. harm and initiate neural

transmission by releasing substances that produce dysmenorrhea (Hillard, 2016). Acupressure therapy has been empirically proven to help endorphins in the brain which can naturally help relieve pain during menstruation (Hartono, 2017).

Research conducted by Pravikasari (2017) explained that acupressure techniques with pregnancy exercise were more effective in reducing the level of low back pain in 15 pregnant women at the Ungaran Health Center with a p value of 0.001 (p <0.05), after being given the intervention of pregnant women who experienced low back pain with pain level scale from moderate to mild as many as 13 (86.7%) respondents while 2 (13.3%) experienced moderate pain.

According to the researcher's assumption, lower back pain experienced by pregnant women in their third trimester should be handled further so that pregnant women can immediately carry out their activities properly, treatments that can be done are massaging acupressure points where this therapy is very easy to do alone and saves costs.

b. Lower Back Pain in Third Trimester Pregnant Women After Being Given Acupressure Therapy at UPTD Puskesmas Marbau in 2022

Based on the results of the research from the observation sheet which was carried out in third trimester pregnant women after being given acupressure therapy at the Marbau Health Center UPTD in 2022, data were obtained from the observation sheet that the majority of respondents before being given acupressure therapy experienced mild lower back pain. The observation results showed that there was a decrease in pain in students from initially experiencing severe pain or moderate pain to mild pain, after being given acupressure therapy. This condition occurs because the therapy increases the levels of endorphins which are useful as pain relievers produced by the body in the blood in the central nervous system. Nervous tissue will provide a stimulus to the endocrine system to release endorphins according to the body's needs and can reduce lower back pain in pregnant women.

The results of this study are in accordance with the statement of Dewi Chandra (2020), that acupressure has an effect on reducing the level of lower back pain in pregnant women. In this study, acupressure on pregnant women with low back pain was carried out twice a week for 3 weeks with a duration of 15 minutes. Acupressure is useful for curing intractable aches and pains such as back pain, spondylitis, stomach cramps, neurological disorders, arthritis etc. Some of the points used in this study to treat lower back pain in pregnant women are the Shensu point (BL23). And from the results of the study also obtained responses from respondents who were given the intervention.

Research conducted by Aswitami (2018) on the Effect of Acupressure Therapy on Low Back Pain in Pregnant Women TMIII in the Work Area of the AbianSemal 1 Health Center with a sample of 20 respondents obtained data on the level of dysmenorrhea pain in pregnant women after the intervention, most experienced a decrease in the pain scale, namely 14 people. became painless and 6 people had mild pain. The results of the statistical test explained that there was a significant decrease in the category of pain before and after the study (ρ<0.05). According to the researchers' assumptions, respondents who have been given therapy will experience a decrease in the pain scale, although there are some respondents who do not feel this effect. This is because the Shensu point (BL23) given to respondents can increase the levels of endorphins which are useful as pain relievers produced by the body in the blood in the central nervous system.

c. The Effect of Acupressure Therapy on Lower Back Pain in Third Trimester Pregnant Women at UPTD Puskesmas Marbau in 2022

Statistical analysis with Wilcoxon showed that there was an effect of giving acupressure therapy on back pain in third trimester pregnant women. Data from table 4.5 also shows that acupressure therapy has an effect on reducing the lower back pain scale in third trimester pregnant women at the UPTD Marbau Health Center in 2022. The results of this study are in accordance with Sentania's study (2020). The results of bivariate analysis using the paired t test obtained a t value of 9.950 and a value of ρ = 0.000 (α = <0.05), which shows that there is a significant difference

in the intensity of lower back pain in third trimester pregnant women III before and after doing bladder 23 point acupressure. This shows a decrease in the intensity of lower back pain in third trimester pregnant women after doing bladder 23 point acupressure, which means there is an effect of bladder 23 point acupressure on lower back pain intensity in third trimester pregnant women.

The results of other studies that support this study are acupressure therapy performed on third trimester pregnant women in the working area of the Abian Semal I Public Health Center which has a significant effect (p=<0.05) on reducing back pain in pregnant women. In line with the results of previous research, Permatasari's study (2019) on 22 third trimester pregnant women, the average back pain score after receiving acupressure intervention to reduce the intensity of back pain, underwent changes before intervention with after intervention. The results of the analysis in the acupressure group obtained a p value of 0.001 (p=<0.05), meaning that there were differences in complaints of low back pain before and after the intervention was given.

According to Researcher Assumptions Acupressure therapy is empirically proven to help the production of endorphins in the brain which naturally can help offer back pain. In this study, respondents who experienced back pain were given acupressure therapy. On average, respondents who complained of low back pain experienced a decrease in pain to mild pain after being given treatment.

d. Research Limitations

Researchers realize that in conducting this research can not be separated from the shortcomings. This was not caused by intentional factors. The limitations in the study were that some of the conditions of the respondents could not be controlled by the researchers, such as the use of drugs, so that the results of the study could not be generalized.

CONCLUSION

Based on the results of the research conducted and the data obtained at the Marbau Health Center UPTD in 2022, it can be concluded as follows: Before being given Acupressure Therapy for Lower Back Pain in Trimester III Pregnant Women at the Marbau Health Center UPTD in 2022, the majority of respondents experienced moderate pain. After being given Acupressure Therapy for Lower Back Pain in Third Trimester Pregnant Women at the Marbau Health Center UPTD in 2022 the majority of respondents experienced Mild Moderate Pain. There is an Effect of Acupressure Therapy on Lower Back Pain in Third Trimester Pregnant Women at the Marbau Health Center UPTD in 2022.

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