

The Effect Of Pregnancy Massage On The Movement Of The Fetus In The Womb In The Second And Third Trimesters Of Pregnancy At TPMB Novi Salim Rajeg In 2022

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Abstract.

Background : The body of a pregnant woman experiences many changes that can be stressful and painful. Pregnant women may experience discomfort due to skin changes, back discomfort, cramps, fatigue, swelling in the legs, varicose veins and nausea. *Purpose of Writing*: The Effect of Pregnancy Massage on the Movement of the Fetus in the Womb in the Second and III Trimesters of Pregnancy at TPMB Novi Salim Rajeg in 2022. *Research Method* : Quantitative research using experimental design. the overall sample in this study. Those who examined at TPMB Novi Salim Rajeg who met the research criteria included inclusion criteria, namely being willing to be a respondent, pregnant women in the second or third trimester, while the exclusion criteria were pregnant women experiencing skin allergies, pregnant women having complications in pregnancy. As for the sample in this study, there were 20 people, namely 10 participants getting pregnancy massage in the intervention group (10 in the control group) (pregnant women were not given pregnancy massage. *Results*: The findings of the paired sample t test in the intervention group showed the difference between before and after pregnancy massage on fetal movements in the womb during the second and third trimesters of pregnancy, with a value of $p = 0.000 (< 0.05)$. Fetal movements in the womb during the second and third trimesters of pregnancy were not massaged, while the value of the control group was $p = 0.08 (> 0.05)$, indicating no difference before and after pregnancy. However, the intervention group was more active for 24 hours compared to the control group with a P value of 0.000 which indicated that pregnancy massage had an impact on fetal movements in the womb during the second and third trimesters of pregnancy at Novi Salim Rajeg TPMB 2022. *Conclusions and Suggestions*: It is hoped that the results of this research can be applied by making SOPs for complementary therapy, especially in giving massage to pregnant women or pregnancy massage, which has been proven to be very helpful for pregnant women's discomfort during the second and third trimesters so that it helps mothers feel relaxed and comfortable.

Keywords: Pregnancy Massage, Movement of the Fetus in the Womb and TPMB.

I. INTRODUCTION

A pregnant woman's body goes through many changes that can be stressful and painful. Pregnant women may experience discomfort due to skin changes, back discomfort, cramps, fatigue, leg swelling, varicose veins, and nausea (Tutik & Mega, 2019). Gentle massage can relieve pain caused by muscle spasms and tension in certain body parts. In addition, massage therapy causes the body to release endorphins that reduce tension. Pregnant women's bodies produce more stress hormones, which can increase blood pressure and blood sugar levels. In addition, stress hormones will affect the fetus because they are transported by the bloodstream into the uterus, where this causes the fetus to receive stress hormones and experience stress even though it is in the womb. (Rochmayanti & Ummah, 2019). When a woman is carrying her first child, the movement of the baby in the womb usually begins to be felt between the 18th and 20th week of pregnancy. Women who have a second or subsequent child usually feel the baby moving in the uterus when the gestational age reaches 16 to 18 weeks. Fetal activity, such as kicking, is an indication that the fetus in the womb is fine. Normal movements indicate a healthy fetus, while deviated movements can indicate stress or other problems in the womb. A type of massage known as pregnancy massage is meant to help pregnant women by increasing blood flow and reducing the discomfort that often occurs. Pregnant women receive different types of massage due to changes in their bodies (Ihca, 2014).

Pregnancy massage is a non-pharmacological treatment for the discomfort of pregnancy in the third trimester. The literature review for the study resulted in the discovery of nine research articles. The results of a literature study show that massage therapy given to TM III pregnant women can reduce the intensity of

back pain, improve sleep quality, reduce stress and anxiety, and make mothers feel comfortable. The purpose of pregnancy massage is to make the mother feel more relaxed and refreshed by applying light pressure to certain body parts. The main goal of massage therapy for pregnant women is to improve the health of the mother and fetus. In the initial survey, the researchers asked pregnant women who had had a pregnancy massage, how did they feel after the pregnancy massage? then the researchers got answers from 3 pregnant women who had tried pregnancy massage, namely that their bodies felt better, previously the body felt sore in the legs and back but after being massaged in pregnant women the feeling of soreness in the legs and back became less, the quality sleeping makes it easier to sleep which is usually difficult to sleep, and the number of fetal movements that are felt increases the number of movements so that the fetus is more active according to statements from pregnant women at TPMB Novi Salim Rajeg.

The results of the answers of pregnant women who have done massage for pregnant women according to researchers are interesting to do research to find out pregnant massage with the number of fetal movements before and after pregnancy massage. The initial survey was also supported by previous research on the benefits of massage for pregnant women to reduce discomfort in pregnant women, according to Maryani, et al. (2020). However, the ongoing research is the effect of pregnancy massage on the movement of the fetus in the womb during the second and third trimesters of pregnancy at TPMB Novi Salim Rajeg in 2022.

II. METHODS

Quantitative research using experimental design. the overall sample in this study. Those who examined at TPMB Novi Salim Rajeg who met the research criteria included inclusion criteria, namely being willing to be a respondent, pregnant women in the second or third trimester, while the exclusion criteria were pregnant women experiencing skin allergies, pregnant women having complications in pregnancy. The sample in this study was 20 people, namely 10 participants received pregnancy massage in the intervention group (10 in the control group) (pregnant women were not given pregnancy massage). The implementation stage in this study used primary data which had been separated into two groups, namely the intervention group, and adapted to the research objectives.

Pregnancy massage was carried out while the control group did not do pregnancy massage. in the control group, or the intervention before being given a pregnancy massage, ask the pregnant woman in the previous day how many times the movement of the fetus has been felt by the mother. After that, do pregnancy massage then observe within 24 hours starting from the time the mother wakes up in the morning and stays awake until late at night, whether the movements of the fetus in the womb are more active than the previous movements or are they still or less active than the previous movements, different tests to find out the effect of pregnancy massage on movement Fetuses in the womb in the second and third trimesters of pregnancy use independent sample T-test statistics for various unpaired sample test tests.

III. RESEARCH RESULT

A. UNIVARIATE ANALYSIS

1. Average Movement of the Fetus in the Womb in the Second and Third Trimesters of Pregnancy in the Intervention and Control Group at TPMB Novi Salim Rajeg in 2022

Variabel	n	Intervensi			Kontrol		
		M	SD	Min-Max	M	SD	Min-Max
Pre-test	20	9,90	1,595	8-12	9,60	1,430	8-12
Post-test		12,10	1,287	10-14	10,20	1,033	9-12

*n = Sampel; M = Mean; SD = Standard Deviation

Based on Table 1 it is known that, of the 10 pregnant women in the second and third trimesters of the intervention group (pregnancy massage was carried out), the average value of fetal movement before pregnancy massage was carried out was 9.90 with a standard deviation of 1.525, then after pregnancy massage the average value was – the average is 12.10 with a standard deviation of 1.287. Judging from the

assessment of the average fetal movement before pregnancy massage, fetal movement is carried out within 24 hours, which is a minimum of 8 times, a maximum of 12 times. While on average there were a minimum of 10 and a maximum of 14 assessments of fetal movement over a 24 hour period. Of the 10 pregnant people in the control group who were in the second and third trimesters (no pregnancy massage was done) the average value of fetal movement before the pregnancy massage was carried out was 9.60 with a standard deviation of 1.430, then after the pregnancy massage the average value was - the mean is 10.20 with a standard deviation of 1.033. Judging from the assessment of the average fetal movement before pregnancy massage, the movement of the fetus within 24 hours is a minimum of 8 times, a maximum of 12 times.

2. Normal Test Results Using Shapiro-Wilk

	Data Pretest		Data Posttest	
	Statistic	sig	Statistic	sig
intervensi	0,884	0,145	0,908	0,268
Kontrol	0,924	0,392	0,895	0,191

Based on Table 2. Tests carried out before and after active fetal movements were observed in the prenatal period in both the intervention and control groups, according to the normality test results. The pre-test value for the Shapiro-Wilk test in the intervention group was $p = 0.145$ ($p > 0.05$), and the post-test value was $p = 0.392$ ($p > 0.05$). The value of the post-test control group was $p = 0.191$ ($p > 0.05$), while the pre-test control group was $p = 0.268$ ($p > 0.05$). By checking the sig numbers, it can be determined whether the data is normal or not; if $\text{sig} > 0.05$ then the data is considered normal; if $\text{sig} < 0.05$, it is considered abnormal. The results of the Shapiro-Wilk test show that the data is regularly distributed.

B. BIVARIATE ANALYSIS

1. The Effect of Pregnancy Massage on the Movement of the Fetus in the Womb in the Second and Third Trimesters of Pregnancy at TPMB Novi Salim Rajeg in 2022

Variabel	n	Paired Difference		SM	t	p-value
		M	Sdf			
Intervensi	10	-2,200	0,919	0,291	-7,571	0,000
Kontrol	10	-0,600	0,966	0,306	-1,964	0,081

*n = Sampel; M = Mean; S-df= standar deviation, SM = Standar Error Mean

Based on Table 2. Tests carried out before and after active fetal movements were observed in the prenatal period in both the intervention and control groups, according to the normality test results. The pre-test value for the Shapiro-Wilk test in the intervention group was $p = 0.145$ ($p > 0.05$), and the post-test value was $p = 0.392$ ($p > 0.05$). The value of the post-test control group was $p = 0.191$ ($p > 0.05$), while the pre-test control group was $p = 0.268$ ($p > 0.05$). By checking the sig numbers, it can be determined whether the data is normal or not; if $\text{sig} > 0.05$ then the data is considered normal; if $\text{sig} < 0.05$, it is considered abnormal. The results of the Shapiro-Wilk test show that the data is regularly distributed.

DISCUSSION

The findings of this study show the impact of pregnancy massage on fetal movements in the womb during the second and third trimesters of pregnancy at TPMB Novi Salim Rajeg in 2022 which is marked by the results of the paired sample t-test statistical test obtained in the intervention group. The value of the difference between massage before and after pregnancy is 0.000 (< 0.05). on the movement of the fetus in the womb during the second and third trimesters of pregnant women. Movement of the fetus in the womb during the second and third trimesters of pregnancy was not prevented by massage, as seen from the control group's score = 0.08 (> 0.05) which showed that there was no difference between before and after pregnancy. In this study, researchers conducted to assess fetal movement after pregnancy massage was carried out because pregnant women feel comfortable and relaxed in their bodies, so that the fetus will become healthier in the womb so that in the opinion of researchers, if pregnant women experience stress during their pregnancy, it can lead to an unhealthy pregnancy. problem. According to previous studies such as the findings of Lilis Surya Wati (2018), there were differences in pregnancy stress between the

intervention group and the control group after the intervention group received the Prenatal Massage package, and there were differences in pregnancy stress in primigravidas in the third trimester before and after the intervention group received the Prenatal Massage package.

Convenience for pregnant women will certainly affect the fetus and will feel the mother's comfort with marked active fetal movements. These fetal movements make pregnant women feel calm that with these movements the fetus in the womb is considered healthy. This is in accordance with the explanation According to Surinirah (2008) in Kartina, I.K.A. (2018) when the baby kicks or strains when approaching the 30th week of the third trimester, Under the skin of the stomach, you can already see the surface of the feet or hands moving. Entering the 33rd week, the daily movements have increased by an average of 375 times, but not all of them can be felt. Usually pregnant women experience 10 movements every day. Babies start reacting to familiar sounds around 34 weeks. Due to the impatience of today's mothers, the third trimester is often referred to as the waiting and watching stage. Two factors that remind a mother of her baby are the baby's movements and the growing belly. Mothers are often worried or worried that the child they will have is not normal. Adapun pendapat Wicaksono, 2012 yang menyatakan wanita hamil yang santai memiliki aliran darah better placenta, which benefits the mother and the fetus. Based on this statement, the researcher argues that this research is related to doing pregnancy massage with fetal movements because during pregnancy massage it can make pregnant women relax and feel comfortable in their bodies being touched, because the second and third trimesters of pregnancy are periods of physical discomfort for expectant mothers. namely feeling sore and sore in the back.

Discomfort in the second and third trimesters is emphasized by the research of Maryani, S., et al (2020) which states the impact of gentle massage on third trimester pregnant women who complain of back pain In addition, according to Ihca, 2014 which states that prenatal massage is a type of massage performed on pregnant women to increase blood flow and reduce the common problems they suffer from. a modified type of massage for changes in the body of pregnant women. Considering what has been found by previous studies that massage for pregnant women or pregnancy massage is associated with fetal movements being active on the grounds that with this touch the mother becomes calm so that a healthy fetus will be active, which is the symptom. The cause of the continuous movement of the fetus is because there are positive stimuli from the outside that make the mother relax. By doing pregnancy massage, it can reduce tension in the back and relieve stiff muscles, which will increase placental blood flow for the mother and fetus. so that the movement of the fetus will become active with the smooth blood cycle of the mother and fetus. The smoothness of the mother's blood cycle can increase oxygen levels which through the placenta which is connected to the umbilical cord, the fetus receives nutrients and oxygen from the mother during pregnancy. Maternal and fetal blood flow through vessels adjacent to each other in the placenta, but even though they are not adjacent to each other, the two bloods do not mix.

Blood from the fetus joins the mother's blood circulation when it flows to the fetus, then it is digested in the lungs and converted from carbon dioxide to oxygen, thus the smooth circulation of the mother's blood is closely related to the health of the fetus in the womb. This is supported by research according to Tammy Febriani (2019) Fetal movement is affected by oxygen levels, which can be high or low. If the fetus receives insufficient oxygen, its body and movements will be weakened. Based on the theory and research, the researchers argue that during the second and third trimesters of pregnancy it is very necessary to have pregnancy massage so that the mother's body becomes relaxed and comfortable for pregnant women. Relaxed pregnant women determine that it will greatly affect the fetus and also be healthy in the womb which is marked by active movements in the womb. Therefore, this research can be used as a guide as information that doing pregnancy massage can affect the active movement of the fetus while in the womb.

IV. CONCLUSION

According to the findings of the investigation, the following can be said, in conclusion:

a. It is known that of the 10 pregnant women in the intervention group who were in the second and third trimesters (pregnancy massage), the average value of fetal movement before the pregnancy massage was

carried out was 9.90 with a standard deviation of 1.525, then after the pregnancy massage the average value was – the average is 12.10 with a standard deviation of 1.287. Judging from the assessment of the average fetal movement before pregnancy massage, fetal movement is carried out within 24 hours, which is a minimum of 8 times, a maximum of 12 times. The minimum and maximum frequency of fetal movements assessed in a 24-hour period were 10 and 14 respectively.

b. Of the 10 pregnant people in the control group who were in the second and third trimesters (no pregnancy massage was done) the average value of fetal movement before the pregnancy massage was carried out was 9.60 with a standard deviation of 1.430, then after the pregnancy massage the value was the average is 10.20 with a standard deviation of 1.033. Judging from the assessment of the average fetal movement before pregnancy massage, the movement of the fetus within 24 hours is a minimum of 8 times, a maximum of 12 times. While the average assessment after within 24 hours of fetal movement is at least 9 times, a maximum of 12 times.

c. The value of the paired sample t test findings of the intervention group showed the difference between before and after pregnancy massage on fetal movements in the womb during the second and third trimesters of pregnancy, with a value of $p = 0.000$ (< 0.05). Fetal movements in the womb during the second and third trimesters of pregnancy were not massaged, while the value of the control group was $p = 0.08$ (> 0.05), indicating no difference before and after pregnancy.

d. However, the intervention group was more active for 24 hours than the control group with a P value of 0.000 which indicated that pregnancy massage had an impact on fetal movements in the womb during the second and third trimesters of pregnancy at Novi Salim Rajeg TPMB 2022.

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