

Effect of effleurage massage technique with postnatal massage technique on afterpains in postpartum mothers

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ABSTRACT

The effect between Effleurage Massage Technique and Postnatal Massage Technique on afterpains in postpartum women at BPM Hj. Rismala Kisaran Asahan Regency in 2023. Afterpains are pain caused by uterine contractions after labor and can interfere with maternal comfort. This study used a comparative research design with a Two-Group Pretest-Posttest Design Without Control approach. The population of this study consisted of 64 postpartum women who experienced afterpains at Hj. Rismala Independent Practice Midwife in Kisaran, Asahan Regency. The sampling technique was carried out by total sampling, where 32 respondents were in the Effleurage Massage Technique group and 32 respondents were in the Postnatal Massage Technique group without a control group. Data analysis using the Mann-Whitney test showed that the Postnatal Massage Technique group had a more significant effect in reducing afterpains compared to the Effleurage Massage Technique group, with a significance value of $p < 0.05$. Thus, the conclusion of this study is that the Postnatal Massage Technique is more effective in reducing afterpains in postpartum women compared to the Effleurage Massage Technique.

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INTRODUCTION

The puerperium is often associated with pain or discomfort felt by the mother after childbirth. Women often experience a range of physical symptoms, physical, emotional and social changes related to the baby and family. One in four women 25% reported gastrointestinal distress and headaches, and three in 75% experienced physical health symptoms from childbirth such as back pain, perineal pain, hemorrhoids and nipple chafing. However, overall the prevalence of back pain and headache is highest during the first year after childbirth (Purwoastuti, 2015).

The pain experienced by post-saline mothers not only affects themselves but also their babies. The pain caused by increasingly frequent uterine contractions makes mothers lazy to breastfeed their babies, because when mothers breastfeed there is a release of oxytocin from the posterior pituitary gland which is stimulated by the baby's suction. Oxytocin also stimulates

myometrial contractions in the uterus which women usually report as afterpains (uterine contraction pain after childbirth) (Walyani, 2017).

Afterpains are caused by continuous contractions in relaxation of the uterus. Uterine contractions occur physiologically which triggers pain that can interfere with the mother's comfort in the postpartum period. The pain called afterpains (meruyan/mules-mules) is caused by uterine contractions, usually lasting 2-4 days postpartum (Asih, 2016). According to Andarmoyo (2018) Pain due to uterine contractions (afterpains) requires treatment to be minimized or suppressed to a minimum. As a midwife who provides maternal care, the pain felt by the mother needs to be intervened, so that it can reduce the discomfort that the mother feels.

According to Andarmoyo (2018) efforts to overcome labor pain can use pharmacological and non-pharmacological methods. Pharmacological methods in overcoming labor pain include Intratechal Lumbar Analgesia (ILA), Lumbar Epidural Analgesia (LEA), Transcutaneous Electrical Nerve Stimulation (TENS) and Sectio Caesaria. Nonpharmacological methods are noninvasive, simple, effective and without harmful effects compared to pharmacological methods. Nonpharmacological methods in overcoming pain include homeopathy, hypnobirthing, waterbirth, relaxation, acupuncture, yoga, massage or massage with the Application of Effleurage Massage Techniques and Postnatal Massage Techniques (Danuatmaja, 2018).

RESEARCH METHOD

According to Notoatmodjo, S., (2018). Research design is a research design that will be carried out. This research is quantitative research. In this study researchers used a comparative / comparative research design with a Two-Group Pretest-Posttest Design Without Control approach which aims to test hypotheses through an intervention in two sample groups and does not have a control group (Sugiyono, 2016). This method is used to determine the effect between effleurage massage techniques and postnatal massage techniques on afterpains in postpartum women.

The study population consisted of all postpartum women (64 people) who experienced afterpains at Hj. Rismala Independent Practitioner Midwife Kisaran Asahan Regency. The research sample was 64 respondents, with each intervention group (effleurage massage technique and postnatal massage technique) consisting of 32 respondents.

Data collection was done by applying different massage techniques to both intervention groups after pretest. Massage was given once to postpartum mothers and followed by a post test to measure the level of pain afterpains. The effleurage massage technique is given for 5-10 minutes, while the postnatal massage technique is given for 25-30 minutes.

The data collected will be processed using SPSS statistical software version 25. Data analysis is carried out using quantitative analysis methods, especially bivariate analysis. The Mann-Whitney U statistical test was used to test the effect of each independent variable on the dependent variable in terms of decreasing afterpains.

RESULTS AND DISCUSSIONS

Characteristics of respondents and frequency distribution based on respondent characteristics are presented in the following table:

Table 1. Data Characteristics of Respondents by Age, parity, education, occupation, economy, effleurage massage group and postnatal massage group

Outside Variables	Group				Homogeneity Test
	<i>Effleurage Massage</i>		<i>Postnatal Massage</i>		P Value
	N	%	N	%	

Age					
<20 Year	9	28,1%	9	28,1%	
21-34 Year	15	46,9%	12	37,5%	0,373
>35 Years	8	25%	11	34,4%	
Postpartum Period					
0-24 hours	3	9,4%	5	15,6%	
24 hours-1 week	12	37,5%	11	34,4%	0,046
1-6 weeks	17	53,1%	16	50,0%	
Postpartum History					
Normal	14	43,8%	16	50,0%	
High Risk	9	28,1%	5	15,6%	0,995
Episiotomy Wound	9	28,1%	11	34,4%	
Parity					
1 Child	6	18,8%	13	40,6%	
2 Children	21	65,6%	9	28,1%	0,485
>2 Children	5	15,6%	10	31,3%	
Education					
Elementary	1	3,1%	0	0%	
Junior High	9	28,1%	11	34,4%	0,075
High School	17	53,1%	16	50,0%	
Higher Education	5	15,7%	5	15,6%	
Occupation					
Housewife		19	10	31,3%	
Self-employed	10	31,3%	18	56,3%	0,002
Civil Servant	3	9,4%	4	12,5%	
Retired	0	0%	0	0%	
Revenue					
< Rp 1.000.000	1	3,1%	3	9,4%	
Rp 1.000.000 – Rp 2.000.000	18	56,3%	15	46,9%	0,030
Rp 2.000.000 – Rp 3.000.000	9	28,1%	10	31,3%	
> Rp 3.000.000	4	12,5%	4	12,5%	

Primary data obtained in 2023

Based on table 1, it shows that in extra-age variables, the majority of respondents aged 25-32 years, namely 15 (46.9%) respondents in the effleurage massage group and 12 (37.5%) respondents in the postnatal massage group. Based on the parity obtained in the effleurage massage group, the majority of respondents had 2 children, 21 (65.6%), respondents in the postnatal massage group, the majority had 1 child, 13 (40.6%).

Based on the puerperium obtained in the effleurage massage group, the majority of respondents had a puerperium period of 1-6 minutes, as many as 17 (53.1%), respondents in the postnatal massage group, the majority had a puerperium period of 1-6 weeks as much as 16 (50.0%). Based on the puerperal history obtained in the effleurage massage group, the majority of respondents had a history of normal puerperium as many as 14 (43.8%), respondents in the postnatal massage group, the majority had a history of normal puerperium as much as 16 (50.0%).

Based on the education obtained in the effleurage massage group, the majority of respondents had a high school education as many as 17 (53.1%), respondents in the postnatal massage group had the majority of high school education as many as 16 (50.0%). Based on the jobs obtained in the effleurage massage group, the majority of respondents had activities as IRT as many as 19 (59.4%), respondents in the postnatal massage group, the majority had activities as self-employed as many as 18 (56.3%). Based on the economy obtained in the effleurage massage group, the majority of respondents have an income of IDR 1,000,000 – IDR 2,000,000, as many as 18 (56.3%),

respondents in the postnatal massage group, the majority have the same income, namely IDR 1,000,000 – IDR 2,000,000 as entrepreneurs as many as 11 (46.9%).

From the results of the homogeneity test of research variables, it can be seen that age has a p value of 0.373 > 0.05 which means homogeneous data, on the parity variable 0.485 > of 0.05 which means homogeneous data, educational variables p value 0.075 > 0.05 which means homogeneous data, work variables p value 0.002 < 0.05 which means inhomogeneous data, While the economic variable p value value 0.030 < 0.05 which means the data is not homogeneous.

Bivariate Analysis

Table 2. Data Analysis of Afterpains Before Effleurage Massage and Postnatal Massage

Outside Variables	Group				Uji Homogenitas
	Effleurage Massage		Postnatal Massage		P Value
	N	%	N	%	
Pre test					
No pain (0)	0	0%	0	0%	0,308
Mild pain (1-3)	5	15,6%	4	12,5%	
Moderate pain (4-6)	19	59,4%	16	50,0%	
Severe Pain (7-9)	3	9,4%	11	34,4%	
Very severe pain (10)	5	15,6%	1	3,1%	

Primary data obtained in 2023

Based on the pretest obtained in the effleurage massage group, the majority of respondents experienced moderate pain, as many as 19 respondents (59.4%), respondents in the postnatal massage group, the majority of respondents experienced moderate pain, namely as many as 16 respondents (50.0%).

Table 3. Data Analysis of Afterpains After Effleurage Massage and Postnatal

Outside Variables	Group				Uji Homogenitas
	Effleurage Massage		Postnatal Massage		P Value
	N	%	N	%	
Pre test					
No pain (0)	0	0%	9	28,1%	0.932
Mild pain (1-3)	5	15,6%	14	43,8%	
Moderate pain (4-6)	20	62,5%	9	28,1%	
Severe Pain (7-9)	7	21,9%	0	0%	
Very severe pain (10)	0	0%	0	0%	

Primary data obtained in 2023

Based on the post test obtained in the effleurage massage group, the majority of respondents experienced moderate pain, as many as 20 respondents (62.5%), respondents in the postnatal massage group, the majority of respondents experienced mild pain, namely as many as 14 respondents (43.8%).

Table 4. Data Normality Test Results Table

Intermediate Variable	Group	
	Effleurage Massage	Postnatal Massage
Afterpains		
Pre Test	0,000	0,000
Post Test	0,000	0,000

Primary data obtained in 2023

Based on table 4. Above the results of the normality test of research variables, it can be seen that all data on pretest and posttest variables in both experimental groups have a significance value of $0.00 < 0.05$ so that it is stated that the data is not normally distributed and continued statistical tests using non-parametric statistics, namely the Wilcoxon test and the Mann Whitney test.

Table 5. Effect of Effleurage Massage Technique With Postnatal Massage Techniques Against Afterpains in Postpartum Mothers

Group	N	Pretest		Posttest		Selisi h rerata	P-value
		Mean	±Sd	Mean	±Sd		
Effleurage Massage	32	3,25	0,916	3,06	0,619	3,50	0,014
Postnatal Massage	32	3,28	0,729	2,00	0,457	15,00	0,000

Based on Table 5. It can be interpreted that the results of the Wilcoxon test showed that there was a decrease in average values before and after being given effleurage massage and postnatal massage techniques. In the postnatal massage group, it is known to have a higher afterpains reduction value, namely the value of the difference between pretest and posttest of 2.00 and can be seen a significant decrease with p value = $0.000 < 0.05$. While in the effleurage massage group is known to have a decrease in afterpains with a pretest and posttest difference value of 3.06 and can be seen a significant decrease with p value = $0.014 < 0.05$. So it can be concluded that there is a significant influence on the average pretest and posttest in each group.

Table 6. Mann-Whitney analysis to see the effect between effleurage massage techniques with postnatal massage technique on afterpains

Group	N	techniques	
		Mean difference	
		Mean Rank	P-Value
Effleurage Massage	32	43,19	0,000
Postnatal Massage	32	21,81	

Based on Table 6. It can be interpreted that the results of the Mann-Whitney analysis showed that the mean rank value in the effleurage massage group was 43.19 and in the postnatal massage group was 21.81 with a significance of 0.000 smaller than 0.05 ($p < 0.05$). So the conclusion is that the postnatal massage group is more influential than the effleurage massage group.

The Effect of Effleurage Massage Technique with Postnatal Massage Technique on Afterpains in Postpartum Mothers

There is a difference in the level of pain after massage between the efflurage massage group and the postnatal massage group, this is due to differences in movement. Where efflurage massage begins with the touch of the palm on the painful area in the abdomen while in postnatal massage the technique carried out is the technique of applying pressure using the hands on the muscles carried out on the entire body of the puerperal mother. According to Parulian (2016) in accordance with the theory that states that the scale of pain felt by each person is different. Postpartum pain is a complex, unique, universal and individual sensation. It is said to be individual because individual responses to pain sensations vary and cannot be equated with other individuals.

In accordance with the theory above, the people in this study sample mostly have a stigma that, after entering the puerperium, respondents are required to do a full-body massage to accelerate the recovery process during their puerperium. So that the existing theory is very supportive of the results of this study, where most respondents feel relaxed, cramps of body muscles, pain and aches

disappear if respondents have massaged their entire body after childbirth. This is supported by the theory and benefits of postnatal massage.

Mann-Whitney analysis to see the effect between effleurage massage techniques and postnatal massage techniques on afterpains

The results of the Mann-Whitney analysis showed that the mean rank value in the effleurage massage group was 43.19 and in the postnatal massage group was 21.81 with a significance of 0.000 smaller than 0.05 ($p < 0.05$). So in conclusion, the postnatal massage group was more influential than the effleurage massage group.

Most postpartum mothers after giving birth will not have time to take care of themselves. Every day was spent taking care of her newborn baby. After giving birth, usually new mothers will complain that the chest feels bad. That's because at the time of childbirth, all the muscles in the body are used. Massage can increase blood and oxygen flow into the muscles and can relieve pain or aches in the body. Doing SPA Postnatal Massage is one solution to make the body fit again.

This research is also in line with research conducted by Estu (2017) where respondents have understood that postpartum mothers can do Postnatal Massage which can help mothers become healthier and not easily tired. Massage after childbirth also provides several benefits and effectively helps the mother's recovery in the puerperium, such as relieving some points of fatigue in the body, releasing tension in the muscles. This shows that respondents' knowledge about Postnatal Massage is quite good.

This is according to what was conveyed by HTAS (2017) some respondents said they had never done massage after giving birth. However, after postnatal massage, respondents felt less tension and fatigue after childbirth and felt more comfortable. This is influenced by the increased production of endorphins and serotonin hormones which provide a relaxing effect from postpartum tension after postnatal massage.

CONCLUSION

Based on the results of the research, it can be concluded that postnatal massage techniques are more effective in reducing afterpains in postpartum mothers compared to effleurage massage techniques. The majority of respondents experienced a significant reduction in pain after receiving postnatal massage, while the majority of respondents in the effleurage massage group still experienced moderate pain. The Mann-Whitney analysis test confirmed the significant difference between the two groups, with postnatal massage showing a lower mean rank. The findings suggest that postnatal massage techniques should be implemented as an intervention to reduce afterpains in postpartum mothers, and further studies with larger populations and control groups are recommended. The results have implications for independent practice midwives, educational institutions, future researchers, and postpartum mothers in considering the use of postnatal massage for managing afterpains.

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