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THE EFFECT OF MANUAL MASSAGE USING EFFLEURAGE TECHNIQUE ON LABOR PAIN INTENSITY DURING THE ACTIVE PHASE OF THE FIRST STAGE OF LABOR AT PMB YOYOH SUHERTI

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Abstract
Childbirth is a series of events that ends with the delivery of a full-term or nearly full-term baby, followed by the expulsion of the placenta and fetal membranes from the mother's body. This study aims to determine whether effleurage can significantly reduce labor pain and improve the overall labor experience for mothers. Methodology: A quantitative research design with a quasi-experimental approach using a one-group pretest-posttest design was employed in this study. The research was conducted at PMB Yoyoh Suherti, involving 15 respondents in the active phase of the first stage of labor. Pain levels were measured before and after the application of effleurage massage using the Visual Analog Scale (VAS). Data were analyzed using descriptive statistics and the Wilcoxon test. Results: The study found a significant reduction in pain levels following the application of effleurage massage. The average pain level before the massage was 9.47 (SD = 0.51), while it decreased to 7.13 (SD = 0.74) after the massage. The Wilcoxon test revealed a p-value of 0.000, indicating a statistically significant difference in pain reduction. Conclusions: Effleurage massage has been proven effective in reducing pain during the active phase of the first stage of labor. The significant reduction in pain supports the use of this technique as a non-pharmacological method for managing labor pain. Recommendations: Based on these findings, it is recommended that effleurage massage be incorporated into labor care practices to enhance pain management.

Keyword: Labor Pain, Effleurage massage

INTRODUCTION

Labor and childbirth are natural physiological events in life. The birth of a baby is also a social event for the mother and family. The mother's role is to deliver her baby, while the family's role is to provide support and assistance during the labor process. In this context, the role of healthcare providers is equally important in offering help and support to ensure that the entire labor process is safe for both the mother and the baby (Sumarah et al., 2009).

Maternal and neonatal mortality and morbidity have long been significant issues, especially in developing countries. About 25-50% of deaths among women of reproductive age are related to pregnancy. Death during childbirth is the leading cause of mortality among women during their peak productive years (Prawirohardjo, 2010). The labor process is generally accompanied by pain. Labor pain differs from other types of pain because it is a normal part of the process, whereas most other types of pain typically

indicate injury or disease (Yuliatun, 2008).

Pain management during labor using pharmacological methods (such as analgesics, anesthesia, and combined spinal epidural (CSE)) can be effective. However, in addition to potential side effects, these methods can be costly and must be administered strictly according to medical indications. Ideally, the best birthing process for both mother and baby is a natural one, without the use of medications (Maryunani, 2010). Non-pharmacological methods (without medication) for managing labor pain include hypnobirthing, acupuncture, acupressure, water birth, and massage during labor, such as effleurage and counterpressure, as well as TENS (Transcutaneous Electrical Nerve Stimulation). The method used in this context is massage during labor using the effleurage technique. Massage involves applying hand pressure on soft tissues without causing joint movement or position changes to relieve pain, induce relaxation, and improve circulation (Maryunani, 2010).

Labor pain is a result of uterine muscle contractions (shortening). These contractions cause pain in the lower back, abdominal area, and may radiate to the thighs. The contractions lead to the dilation of the cervix, which initiates the process of labor. The pain experienced during labor is unique to each mother and can be influenced by several factors, including culture, fear, anxiety, previous childbirth experiences, labor preparation, and support (Judha, 2012).

Effleurage is a light and rhythmic massage technique that involves gentle strokes on the abdomen, lower back, or thighs. The pressure applied during effleurage varies for each laboring mother. Some may prefer very light pressure, while others might prefer firmer strokes. The massage should be performed rhythmically so that the mother can breathe slowly and steadily (Yuliatun, 2008).

METHODS

This study uses a quantitative research method. The research design applied is a quasi-experimental approach with a one-group pretest-posttest design, where a pretest is first conducted on the experimental group without using a control group. After the experiment is conducted, a posttest is immediately administered.

The population in this study consists of all laboring mothers in August 2020 at PMB Yoyoh, totaling 25 respondents. The sample in this study consists of laboring mothers in the active phase of the first stage of labor at PMB Yoyoh Suherti, selected using purposive sampling. The inclusion criteria are: mothers giving birth at PMB Yoyoh Suherti, patients in the active phase of the first stage of labor, normal condition of both mother and fetus, and willingness to be a respondent. The exclusion criteria are: complications or difficulties during the active phase and patients undergoing labor induction. Data collection in this study is conducted using observation techniques with an observation sheet, and pain measurement is performed using the Visual Analog Scale (VAS) ranging from 0 to 10 cm.

RESULTS AND DISCUSSION

The characteristics of the respondents in this study include age, employment status, and education. The distribution of respondents based on age, employment status, and education is as follows.

Table 1
Distribution of Respondent Characteristics in the Intervention Group Based on Age, Employment Status, and Education at PMB Yoyoh Suherti Pringsewu, August 2020

Respondent Characteristics			
Age (years)	**Min-Max**	**Mean (X)**	**SD**
	24-36	29,67	3,039
Education		N	%
1. Elementary School (SD)		1	6,7
2. Junior High School (SMP)		0	0
3. Senior High School (SMA)		12	80
4. Diploma/Bachelo		2	13,3
Total		15	100
Employment			
1. Employed		1	6,7
2. Unemployed		14	93,3
Total		15	100

In the table, it is noted that the respondent characteristics show an average age of 29.67 years with a standard deviation of 3.039. The majority of respondents have completed high school, with 12 individuals (80%), and most are unemployed, totaling 14 individuals (93.3%).

Table 2
Difference in Average Pain Levels of Respondents Before and After Effleurage Massage

Variable	Frequency (n)	Mean	SD	Min-Max
Pain level before Effleurage Massage by Husband	15	9,47	0,51	9-10
Pain level after Effleurage Massage by Husband	15	7,13	0,74	5-8

Table 2 illustrates the labor pain levels of respondents before and after the application of effleurage massage. The results show that the average pain level before the effleurage massage was 9.47, with a standard deviation of 0.51. After the effleurage massage, the average pain level decreased to 7.13, while the standard deviation increased to 0.74.

Table 3
Effectiveness of Effleurage Massage on Pain During the Active Phase of the First Stage of Labor

Variable	Frequency (n)	Mean	Min-Max	p-value
Pain level before Effleurage Massage	15	9,47	9-10	0,00
Pain level after Effleurage Massage	15	7,13	5-8	

Table 3 shows the average pain levels during labor with Wilcoxon test analysis at α = 0.05. The significance value obtained is 0.000 (p-value < 0.05). Statistically, there is a significant effectiveness of effleurage massage on pain during the active phase of the first stage of labor before and after the intervention.

The study results indicate that the application of effleurage massage led to a reduction in labor pain during the active phase of the first stage by 2.34 points. A significant effectiveness was observed in reducing labor pain during this phase. This finding aligns with the gate control theory (Wulandari & Hiba, 2015), which suggests that pain decreases after effleurage massage because the sensation of touch and pain stimuli travel together to the brain, effectively closing the "gate" in the brain and limiting pain intensity.

Effleurage massage has long been used during labor to reduce pain by decreasing the secretion of adrenaline and noradrenaline while increasing the production of endorphins and enhancing the release of oxytocin (Haghighi, Masoumi, & Kazemi, 2016). Based on these data, it can be concluded that effleurage massage is highly effective in alleviating pain during the active phase of the first stage of labor.

This finding is consistent with the research by Wahyuni & Wahyuningsih (2015), which states that when mothers focus on enjoying effleurage massage, they become relaxed and calm, leading to improved oxytocin flow. Oxytocin plays a crucial role in uterine contractions, making them more adequate. As uterine contractions become more effective, cervical dilation and thinning progress more rapidly. Effleurage, or light abdominal massage, serves as a form of skin stimulation used during labor that induces relaxation (Monsdragon, 2008). When a mother feels relaxed and calm, her brain reverts to a primitive mode, and oxytocin is released, leading to an increase in endorphins that help reduce pain (Chapman, 2006).

CONCLUSION

Based on the research results and the obtained data, it can be concluded that effleurage massage is effective in reducing pain during the active phase of the first stage of labor at PMB Yoyoh Suherti.

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