

## The Effect of Back Massage on Labor Pain in Phase I Active in Maternity Mothers

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### Article Info:

Submitted:  
05-07-2023  
Revised:  
08-08-2023  
Accepted:  
09-08-2023

DOI:  
<https://doi.org/10.53713/nhsj.v3i3.278>



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### ABSTRACT

The most important midwifery care in the delivery process is to apply the principle of "Mother Love" namely respecting each other's culture, beliefs, and desires of the mother and involving the husband and family. Non-pharmacological pain management can be carried out by most health care providers (doctors, nurses, and midwives) who may also involve the mother's family, including back massage. This study aims to know the effect of back massage on labor pain during the first active phase in labor mothers. This research is a type of descriptive research with a quasi-experimental research design with a pretest-posttest one group with the sample of this study, namely mothers in the active phase of the first stage of labor who experience labor pain as many as 30 respondents. This sample was taken using a purposive sampling method with a measuring instrument, namely a numerical pain scale and an observation sheet with an ANOVA analysis test. The results of this study show that there are differences in labor pain after back massage. There is a coercive effect between back massage and labor pain with a p-value=0.00 (<0.05), and husband's assistance with labor pain with a p-value=0.03, while there is no significant effect between parity and labor pain with a p-value = 0.07. There is an effect of back massage on labor pain in the first active phase of the birthing mother. It is hoped that more/frequent back massage techniques are performed to reduce labor pain during the first active phase according to SOP.

Keywords: back massage; labor pain; delivery process

### INTRODUCTION

Labor is an expulsion of the fetus that occurs at full term of pregnancy (37-42 weeks), spontaneous birth, and posterior head presentation, which lasts no more than 18 hours for both mother and fetus. Discharge of products of conception at UK >40 weeks. Expelling the products of conception (fetus and placenta) that are full-term or can live outside the womb through the birth canal or other means with or without assistance (own strength). This process begins with true labor contractions characterized by progressive changes in the cervix and ends with the birth of the placenta (Sarwono, 2020). The most important midwifery care in the delivery process is to apply the principle of "Mother love," namely respecting each other's culture, beliefs, and desires of the mother and involving the husband and family. The study results show that mothers who are cared for and supported during labor will get a sense of security and better outcomes (Sarwono, 2020).

Pain is a subjective sensation or discomfort/unpleasant feeling that occurs from physical stimulation or nerve fibers in the body to the brain and is followed by physical, physiological, and emotional reactions (Padilla, 2014). Pain is an unpleasant state caused by physical, mental, and psychological stimulation. Even if pain persists, it can affect the quality of life and requires prompt treatment, including assistance from family and colleagues (Zainal Abidin et al., 2022). Labor pain causes easily recognizable symptoms. Increased sympathetic nervous system activity in response to pain can cause changes in blood pressure, heart rate, respiration, and skin color. Emotional changes in the form of fear, with air tightness, moaning, crying, and hand movements (indicating pain) of varying intensity from person to person (Dahlan et al., 2023).

The first stage of labor pain is mainly caused by a stimulus delivered through the cervical and lower uterine nerves. Pain during labor is a physiological thing experienced by birthing mothers. This is due to the lowering of the fetal head into the pelvic cavity, which presses on the nerves, causing the pain felt by the birthing mother. Pain during labor is subjective and unique, meaning that the response to pain in birthing mothers varies due to different pain thresholds. Differences in pain are influenced by past experiences, anxiety, and emotional tension (Andarmoyo & Suharti, 2014). Exercise during pregnancy can reduce the risk of stress and pain during childbirth. In addition, the essence of pregnancy exercise is to

practice breathing before giving birth. Help the mother relax and control the situation when the baby is born (Novelia et al., 2023).

Unresolved labor pain can cause death to the mother and baby because pain causes the mother's breathing and heart rate to increase, disrupting the flow of blood and oxygen to the placenta. According to WHO (2019) the world's MMR (Maternal Mortality Rate) is 303,000 people. In the last 30 years, the efforts made by the government have been able to reduce MMR. In 2020 MMR in Indonesia has reached 230 per 100 thousand live births. However, if you look at the downward trend, it is still very slow. Even today, MMR is still far from the Millennium Development Goals (MDGs) target of 102 per 100 thousand births. With a decrease in MMR of only 1.8% per year, maternal deaths compiled from family health program records at the Ministry of Health in 2020 shows 4,627 deaths in Indonesia. This number shows an increase compared to 2019 of 4,221. MMR in Banten province reached 242 per 100 thousand live births (Indonesian Ministry of Health, 2020), while in Tangerang District, MMR in 2021 increased to 71 cases.

Handling and monitoring labor pain during the first stage of the active phase is very important because this determines whether the mother can have a normal delivery or end it with an action due to complications caused by severe pain. Pain can affect the mother's condition through fatigue, fear, worry, and stress. Stress can cause the weakening of uterine contractions and result in long labor (Maryunani, 2015). Handling labor pain must be considered in providing midwifery care by a midwife. Sometimes health workers forget to apply techniques to control low back pain in mothers in the first stage of labor so that mothers experience excruciating pain. This will provide a bad birth experience, sometimes experiencing prolonged labor trauma. So, a birth attendant needs to meet the mother's need for comfort during childbirth. One of these needs is the most appropriate and effective control of low back pain in labor for her and needs support to apply this technique during labor (Yanti, 2010).

Today, many methods are offered to reduce labor pain, both pharmacologically (using drugs) and non-pharmacologically (traditionally). Some of the pharmacological management of labor pain is mostly a medical action. Meanwhile, non-pharmacological pain management can be carried out by most health care providers (doctors, nurses, and midwives) who may also involve the mother's family. Although pharmacological methods are more effective in reducing labor pain, apart from being more expensive, they can also potentially have adverse side effects for both the mother and the fetus (Maryunani, 2015).

The advantages of non-pharmacological methods include being cheap, simple, effective, without adverse effects, and increasing satisfaction during labor because the mother can control her feelings and strength. Non-pharmacological methods (traditionally) vary widely and can be applied to help reduce pain, including massage. In general, two massage techniques are performed in labor, namely the Back-Effleurage and Counter-Pressure techniques, which are relatively effective in helping reduce low back pain during labor and are safe because of no side effects (Yanti, 2010). Massage is the oldest human activity to reduce fatigue and stress. Massage was considered one of the best ways to relieve fatigue, stress, muscle stiffness, and arthritic pain (Agustina et al., 2022). The benefits of massage therapy include increasing blood circulation, relaxing muscles, relieving muscle spasms, reducing anxiety, reducing swelling and discomfort from edema, and reducing symptoms of depression (Carolin et al., 2023). This study aims to know the effect of back massage on labor pain during the first active phase in labor mothers.

## METHOD

The design of this study was a descriptive Quasi Experiment using a group pre and post-test design, a measurement carried out before and after the study (Hidayat, 2012). In this design, respondents were given back massage interventions to reduce labor pain during the first stage of the active phase for mothers giving birth at PMB Intan. S in 2022. This research was conducted from September to October 2022 at PMB Intan S. Tangerang. The population in the study was 30 people who were taken from all mothers who gave birth at PMB Intan for the June-August 2022 period. The sample in this study was postpartum primipara.

**RESULT**

Table 1. Distribution of the Frequency of Mothers Experiencing Labor Pain Phase I Active Before and After Back Massage

Labor Pain	Before Back Massage		After Back Massage	
	Frequency	Percentage	Frequency	Percentage
Mild	8	26.7	20	66.7
Moderate	13	43.3	10	33.3
Controlled severe	9	30.0	0	0.0

Based on Table 1, it shows that of the 30 respondents who gave birth pain before back massage, there were 8 respondents with mild pain (26.7%), moderate pain, 13 respondents (43.3%) and severely controlled pain 9 respondents (30.0%). It also shows that of the 30 respondents who experienced labor pain after back massage, 20 respondents (66.7%) had mild pain, and 10 (33.3%) had moderate pain.

Table 2. The Effect of Back Massage on Labor Pain during the First Active Phase in Women Giving Birth in 2022

Variable	Labor Pain			Total		p-value
	Mild	Moderate	Controlled Severe	n	%	
Back massage						
Pretest	8	13	9	30	100	0.000
Posttest	20	10	0	30	100	
Parity						
Primipara	2	4	6	12	40	0.720
Multipara	6	9	3	18	60	
Accompaniment husband						
Not enough	2	0	0	2	6.6	0.035
Enough	3	6	5	14	46.7	
Good	3	7	4	14	46.7	

Based on the study's results, it was shown that of the 30 respondents in labor who experienced labor pain before the back massage, 9 respondents experienced controlled severe pain. After the back massage, no respondents experienced controlled severe pain. With a p-value of 0.000, this means that there is an influence between back massage on reducing labor pain in the first stage of the active phase.

**DISCUSSION**

Back massage, in Supliyani's research, (2017), revealed that the back massage technique is an intervention that is relatively easy to carry out by health workers and can even be carried out by family members to reduce the intensity of labor pain. This technique is very needed to reduce complications in the mother and fetus during labor and after delivery. There are several goals of back massage, which can increase blood circulation, provide comfort, reduce anxiety, reduce muscle tension, relieve insomnia, reduce pain perception, and can stimulate skin circulation. can function as an epidural analgesic that can reduce labor pain and stress and can provide a sense of comfort.

The cervix in multiparous women experiences softening before delivery, but this is not the case with the cervix in primiparous women which causes more severe pain in primiparas than in multiparas. This theory is not in line with the results of this study which showed that out of 30 respondents experiencing labor pain as much as 60% of respondents experienced labor pain in multipara parity with a P Value of 0.72 this means that there is no effect between parity on reducing labor pain in the first stage of the active phase. Nonetheless, primiparas report more severe pain intensity than multiparas. In this study there was no significant difference in the intensity of primiparous and multiparous labor pain. Some women cannot describe labor pain. Some say that labor pain is like fire, unbearable, uncomfortable.

Based on the results of the study, it was shown that of the 30 respondents who were giving birth experienced labor pain as many as 46.7% of the respondents received good husband's assistance. With a P Value of 0.035, this means that there is an influence between husband's assistance on reducing labor pain during the first stage of the active phase. The results of this study are in line with the results of research conducted by Arum (2015), namely that there is a significant relationship between husband's assistance and labor pain. This is caused by psychological factors where mothers who

receive good husband's assistance will feel their husband's emotional support, this can distract the mother and reduce pain or the stressor level which becomes a simulation of pain during childbirth so that the intensity of pain can be reduced.

Husband or family support plays a very important role in maintaining or maintaining one's integrity, both physically and psychologically. Someone in a state of stress or pain will seek support from others, so with this support, it is hoped that it can reduce pain intensity. The availability of good facilities and support systems from the environment in dealing with pain and the support of a husband or family can help reduce the pain experienced during childbirth (Andarmoyo & Suharti, 2014).

## CONCLUSION

The results showed an influence between back massage and labor pain in the first stage of the active phase. There is an influence between the husband's assistance on reducing labor pain during the first stage of the active phase. According to SOP, more/frequent back massage techniques are needed to reduce labor pain during the first active phase.

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