

# **The Relationship Between Mothers' Knowledge and the Implementation of Endorphin Massage in Reducing Postpartum Pain at Alisah Clinic**

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## **ABSTRAK**

Health is a state of well-being of body, mind, and social life that enables every individual to live productively in social and economic terms. Childbirth is the series of events involving the delivery of a baby that has developed sufficiently in the mother's womb, followed by the expulsion of the placenta and fetal membranes from the mother's body. The main problem commonly reported by women in labor is pain. One non-pharmacological management method to reduce labor pain is endorphin massage. The purpose of this research is to determine the Relationship Between Mothers' Knowledge and the Implementation of Endorphin Massage in Reducing Postpartum Pain at Alisah Clinic in 2025. This research is an analytical survey with a cross-sectional approach. The population in this study consisted of 35 postpartum mothers. The sample in this study used total population sampling, where the entire population of 35 individuals was taken as the sample. The results show that the majority of mothers had a low level of knowledge, totaling 21 individuals (60%), while the minority had a good level of knowledge, totaling 2 individuals (5.7%). The majority of mothers did not implement endorphin massage to reduce postpartum pain, totaling 31 individuals (88.6%), while the minority did implement it, totaling 4 individuals (11.4%). There is a Relationship Between Mothers' Knowledge Level About Postnatal Massage and the Benefits of Postnatal Massage During the Postpartum Period at AR Razi Clinic in 2025, as indicated by a  $\text{Sig.}$  value of  $0.000 < \alpha$  value of 0.05. The conclusion of this research is that there is a Relationship Between Mothers' Knowledge and the Implementation of Endorphin Massage in Reducing Postpartum Pain at Alisah Clinic in 2025. It is recommended that mothers increase their knowledge, specifically regarding endorphin massage, to reduce postpartum pain.

### **Keywords:**

Mothers' Knowledge, Implementation of Endorphin Massage

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## **1. INTRODUCTION**

Health is a state of complete physical, mental, and social well-being that enables every one to live a socially and economically productive life. Health is the primary foundation for a person's quality of life. When a person is healthy, they have the energy, focus, and capacity to learn and grow, work, contribute, build relationships, and enjoy life and interests. A healthy state can be achieved if pain can be managed as soon as possible, particularly for mothers post-partum.

Childbirth is a series of events involving expulsion of a sufficiently developed baby from the mother's uterus, followed by expulsion of the placenta and fetal membranes from the mother's body. (1) The main problem commonly reported by patients in labor during the first stage (active phase) is pain. Pain during labor can lead to various issues; the pain that arises causes mothers to feel stress and excessive anxiety. Respiration and pulse also increase, thereby disrupting the fetal supply from the placenta. (2)

Pain can also cause uncoordinated uterine activity, resulting in prolonged labor. Labor pain is caused by contraction of the uterus in an effort to expel the products of conception. During childbirth, the resulting pain causes stress and anxiety. Respiration and pulse increase, thus disrupting the fetal supply from the placenta. (3)

If a patient complains of pain, there is only one action they desire to reduce that pain. Therefore, effective pain management must be implemented to reduce pain.

According to data from the World Health Organization (WHO), pain during the labor process affects an estimated 210 million pregnancies each year, and it is estimated that about 20 million laboring mothers experience pain during this process. (4)

Furthermore, data from the Association of Southeast Asian Nations (ASEAN) study on pain indicate that 93.5% of labor pain reaches moderate to severe levels. In 2023, labor pain was a contributing factor in 25-50% of maternal deaths caused by the mother's psychological condition, including her perception of pain during childbirth. Additionally, data show that 99% of maternal deaths occur because of complications during childbirth. This high mortality rate is partly due to a lack of knowledge about the causes of pregnancy, childbirth, and postpartum complications. (5)

Based on data from the Indonesian Ministry of Health in 2023, reports indicate that the incidence of labor pain in Indonesia reaches an average of 85-90% among pregnant women about to give birth experiencing severe labor pain, with 7-15% of laboring mothers not experiencing severe pain). (6)

Based on data from the Alisah Clinic, nearly 90% of pregnant women experience severe labor pain (85-90%), while 7-15% do not experience labor pain. (8)

The childbirth process is synonymous with pain that will be experienced. Physiologically, pain occurs when the uterine muscles contract to dilate the cervix and push the baby's head toward the pelvis. Pain during the first stage of labor is a physiological process caused by cervical dilation, hypoxia of the uterine muscle during contraction, ischemia of the uterine corpus, stretching of the lower uterine segment, and compression of the nerves in the cervix. Labor pain can cause stress, leading to the excessive release of hormones, such as catecholamines and steroids. (9)

Endorphin massage is a non-pharmacological management method for reducing labor pain. Endorphin massage is a light touch/massage therapy that is important for pregnant women from the time approaching childbirth until delivery. This is because massage stimulates the body to release endorphin compounds, which are pain-relievers and can create a feeling of comfort. Endorphins are known to have many benefits. (11)

This endorphin massage technique has no side effects on the mother and baby and does not require expensive costs. The purpose of endorphin massage is to reduce or eliminate pain in mothers when giving birth. Endorphin massage, which is a touch technique involving light massage, can normalize the heart rate and blood pressure and increase the mother's state of relaxation by triggering feelings of comfort through the skin surface. Research has shown that this technique can increase the release of oxytocin, a hormone that facilitates childbirth. (10)

Endorphin massage is performed by providing gentle, light massage strokes in a V-shape from the left and right shoulders toward the tailbone, and is repeated during contractions in labor. According to the results obtained by Antik et al. (2017), there is an effect of using endorphin massage on the intensity of the pain scale during the first stage, the active phase of labor. (11)

However, the implementation of endorphin massage is not yet comprehensive because many mothers still do not understand or have even heard of it.

Based on this description, the researcher is interested in conducting a study on "the relationship between mothers' knowledge and the implementation of endorphin massage in reducing postpartum pain at the Alisah Clinic." This study aimed to determine the relationship between mothers' knowledge and the implementation of endorphin massage in reducing postpartum pain at the Alisah Clinic.

## 2. RESEARCH METHOD

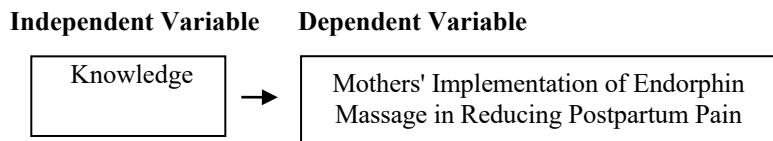
The type of research design used was an **analytic survey design**, which attempts to explore how and why a phenomenon occurs. (24) It then analyzes the correlation dynamics between phenomena, both risk factors and effects, using a **cross-sectional approach**, meaning that data concerning the independent (or risk) variables and the dependent (or outcome) variables are collected simultaneously. (32) In other words, each research subject was observed only once, and the measurement of the subject's characteristics or variable status was taken at the time of examination. This study aimed to determine the relationship between postpartum mothers' knowledge and the implementation of endorphin massage after childbirth at the Alisah Clinic.

This study was conducted at **Alisah Clinic**, Jl. Arief Rahman Hakim, Jl. AR. Hakim Gg. Buntu No.34, Tegal Sari I, Medan Area District, Medan City, North Sumatra 20216, Indonesia. The reason for choosing the Alisah

Clinic as the research location was the high number of postpartum mothers who were still unaware of endorphin massage. The research period was from June to August 2025.

The population in this study comprised postpartum mothers at the Alisah Clinic in June, totaling 35 people. The sampling technique in this study was total population sampling, in which the entire population of July was used as the sample. The study sample consisted of 35 postpartum mothers in June at the Alisah Clinic.

The research conceptual framework is explained in a diagram, where the independent variable is knowledge, and the dependent variable is mothers' implementation of endorphin massage in reducing postpartum pain. This is presented as follows:



### 2.1. Measurement Aspects

- a. Knowledge
- b. Implementation of endorphin massage to reduce postpartum pain.

### 2.2. Data Processing and Data Analysis

According to Notoatmodjo (2010), manual data processing is rarely performed because it is considered outdated. However, owing to limitations in facilities and infrastructure or if the data volume is not too large, manual data processing is still conducted. The data processing steps were as follows.

- a. *Collecting*
- b. *Checking*
- c. *Coding*
- d. *Entering*
- b. *Data processing*

### 2.3. Data Analysis

According to Notoatmodjo (2010), data analysis in research typically includes the following step-by-step procedure:

- a. Univariate Analysis
- b. Bivariate Analysis

## 3. RESEARCH RESULTS AND DISCUSSION

### 3.1. Mothers' Knowledge

Based on Table 4.1, it can be seen that 2 (5.7%) mothers had good knowledge, 12 (34.3%) mothers had sufficient knowledge, and 21 (60%) mothers had poor knowledge..

### 3.2. Implementation of Endorphin Massage in Reducing Postpartum Pain

Based on Table 4.2, it can be seen that the number of mothers who implemented endorphin massage to reduce postpartum pain is 4 people (11.4%), and the number of mothers who did not implement endorphin massage to reduce postpartum pain is 31 people (88.6%).

### 3.3. The Relationship Between Mothers' Knowledge and the Implementation of Endorphin Massage in Reducing Postpartum Pain at Alisah Clinic

Based on Table 4.3, it can be seen that out of the 35 respondents, mothers had **good** knowledge: two people (5.7%). Of these, two people (5.7%) with good knowledge implemented endorphin massage to reduce postpartum pain, and 0 people (0%) with good knowledge did not implement it. Mothers with sufficient knowledge 12 (34.3%). Of these, 2 people (5.7%) with sufficient knowledge implemented endorphin massage, and 10 people (28.6%) with sufficient knowledge did not implement it. Mothers with **poor** knowledge 21 (60%). Of these, 0 (0%) with poor knowledge implemented endorphin massage, and 21 (60%) with poor knowledge did not implement it. There is a relationship between the mothers' knowledge and the implementation of endorphin massage in reducing postpartum pain at the Alisah Clinic, as indicated by the *Sig.* value of 0.000, which was less than the  $\alpha$  value of 0.05.

## 4. CONCLUSION

From the research results on the relationship between mothers' knowledge and the implementation of endorphin massage in reducing postpartum pain at the Alisah Clinic, the following conclusions were drawn:

1. Regarding mothers' knowledge, the majority had a low level of knowledge, totaling 21 (60%), while the minority had a good level of knowledge, totaling two (5.7%).

2. Regarding the Implementation of Endorphin Massage in reducing postpartum pain, the majority of mothers did not implement endorphin massage to reduce postpartum pain, totaling 31 people (88.6%), while a minority did implement it, totaling 4 people (11.4%).
3. There is a relationship between the mothers' knowledge and the implementation of endorphin massage in reducing postpartum pain at the Alisah Clinic, as indicated by the Sig. value of 0.000, which is less than the  $\alpha$  value of 0.05.

## 5. RECOMMENDATIONS

1. Considering the numerous shortcomings and weaknesses of this study, it is recommended that future researchers conduct further investigations on the relationship between mothers' knowledge and the implementation of endorphin massage for postpartum mothers to reduce pain, incorporating other supporting variables.
2. It is hoped that Postpartum Mothers: It improve their knowledge, specifically regarding reducing postpartum pain, by implementing endorphin massage.
3. For the Research Site-Healthcare Facility, it is recommended that healthcare workers more frequently conduct education/counseling sessions on the benefits of endorphin massage for mothers from pregnancy through childbirth, and encourage mothers to attend whenever such sessions are held.

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