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Labor Pain in Second Stage Active Phase Inpartu Mothers on the Effect of Endorphin Massage in Regional General Hospitals

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ABSTRACT

Labor pain is one of the most intense experiences experienced by women during the birth process. The intensity of pain increases along with the development of the labor stage, especially in the active phase of the second stage. Non-pharmacological interventions such as endorphin massage have been introduced as a safe and effective alternative method to reduce pain. This study aims to determine the effect of endorphin massage on pain intensity in mothers in the active phase of the second stage of labor at the Regional General Hospital. This study used a quasi-experimental design with a pretest-posttest approach. control group. The results showed that endorphin massage can significantly reduce pain intensity. This intervention is recommended to be implemented as part of pain management in the labor process.

Keywords: Labor Pain, Second Stage, Active Phase, Endorphin Massage, Inpartum Mother, Pain Management

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1. Introduction

Labor is a complex physiological process and is often accompanied by severe pain, especially in the active phase of the second stage, where there is full cervical dilation until the baby is born. Labor pain is caused by uterine contractions, cervical distension, and





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pressure on the pelvic structures. High levels of pain can increase anxiety, stress, and even slow down the labor process.

Endorphin massage is a non-pharmacological method that aims to stimulate the release of endorphins, the body's natural chemicals that function as analgesics. This technique is not only safe but also easy to perform by health workers and birth companions.

Several previous studies have stated that endorphin massage is effective in reducing labor pain, but its application is still uneven in various health facilities. Therefore, it is important to evaluate the effect of endorphin massage scientifically in regional general hospitals so that it can be used as an alternative in labor pain management. Research Objective To determine the effect of endorphin massage on pain intensity in mothers in the second stage of active phase.

Labor pain is pain that arises due to uterine contractions and cervical dilation and mechanical pressure from the fetus pressing on the surrounding tissue. Stage II is the stage of labor starting from complete cervical dilation to the birth of the baby. The active phase is characterized by increasingly strong, frequent, and regular contractions, causing very intense pain. Factors that Influence Labor Pain include Physiological as Parity, fetal position, fetal size, Psychological in the form of Anxiety, fear, mental readiness. Environment as Family support, health workers, and delivery room conditions.

Endorphin massage is a technique that involves gentle massage of the lower back, shoulders, and arms, which aims to stimulate the production of endorphins. Endorphins act as natural analgesics that reduce the perception of pain.

Research by Widyaningsih (2021) showed that endorphin massage can reduce the pain scale from 7 to 4 within 30 minutes after the intervention. Similar results were found by Rahmawati (2022), which showed that mothers who received endorphin massage experienced labor times and higher satisfaction.

2. Research Methods

This study used a quasi-experimental design with a pretest-posttest approach. control group design. Population All mothers in active phase II stage of labor at the Regional General Hospital. Sample: 30 respondents, 15 as the intervention group and 15 as





the control group. Sampling technique: Purposive sampling with specified inclusion and exclusion criteria. The independent variable is Endorphin Massage and the dependent variable is Labor pain intensity. The research instrument is a Numerical Pain Scale (Numeric Rating Scale /NRS) 0–10 and Observation sheet and intervention documentation. Data Analysis Techniques are Normality Test: Kolmogorov-Smirno and Paired t-test and Independent t-test.

3. Results And Discussion

Respondent Characteristics

The intervention and control groups had homogeneous characteristics of age, parity, and pregnancy status. The majority of mothers were aged 20–35 years and were at term.

a. Research results

The mean pain score before massage in the intervention group was 7.6, while after massage it decreased to 4.1. In the control group, the mean pain before and after remained high, namely 7.4 to 7.0.

Group	Before Massage	After Massage	Pain Score
Intervention	7.6	4.1	- 3.5
Control	7.4	7.0	- 0.4

The results of the statistical test showed a significant difference ($p < 0.05$) between the intervention and control groups.

b. Discussion

Significant pain reduction in the intervention group indicates the effectiveness of endorphin massage in stimulating the release of endorphins and reducing the perception of pain. Massage also improves blood circulation, reduces muscle tension, and provides a sense of comfort and relaxation.

This intervention is easy to do, does not require special equipment, and has minimal side effects. It is very suitable for implementation in primary health care facilities to hospitals.





4. Conclusion

Endorphin massage has been proven effective in reducing pain intensity in mothers in the second active phase of labor at the Regional General Hospital. This intervention can be part of non-pharmacological pain management recommended in obstetric practice.

- a) For health workers: Can implement endorphin massage as part of standard interventions during labor.
- b) For health institutions: Training is needed for midwives and nurses in endorphin massage techniques.
- c) For further researchers: It is recommended to conduct research with larger samples and assess the psychological aspects that influence labor pain.

5. Compliance with Ethical Standards

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Informed Consent

All participants were given an explanation of the purpose, procedures, benefits, and risks of the study. Participation was done voluntarily by signing the consent form after receiving information (informed consent). consent).

Conflict of Interest

The authors declare that they have no conflict of interest in the conduct and reporting of this research.

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