



## **Giving Endorphine Massage Against the Psychological Readiness of Primigravida in Facing Labor**

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### **ABSTRACT**

*Depression stress can be experienced in pregnant women if complaints and causes of change are left. A relatively crucial light massage is given to pregnant women in the time leading up to labor. This study aims to determine the effect of endorphine massage on the psychological readiness of pregnant women primigravida trimester III is facing birth in the working area of Puskesmas. The research design using pre-experiment. The population is the entire pregnant woman primigravida trimester III gestational age 36 weeks. Sampling technique using purpose sampling with a sample count of 30. Data analysis with Wilcoxon. The study results obtained the average level of psychological readiness of pregnant women before being given intervention is 80%. After being given intervention, the psychological readiness level of pregnant in the face of labor is 100%. Statistical tests with Wilcoxon obtained value of  $p = 0.000 < \alpha = 0.05$ , there was a significant difference in psychological readiness before and after treatment. There is an effect of endorphine massage on the psychological readiness of pregnant women primigravida trimester III in the face of labor. Endorphine massage can be applied at home with a partner or family to overcome complaints in pregnancy.*

**Keywords: Psychological Readiness, Primigravida, Endorphine Massage**

## INTRODUCTION

Pregnancy is a somewhat difficult time for a mother therefore, pregnant women need support from various parties, especially the husband, in order to establish the pregnancy process until giving birth safely and comfortably (Korjagina et al., 2021).

Pregnancy is a happy time for a married couple. A healthy pregnancy is of course highly expected by pregnant women because with a healthy pregnancy, the child who will be born will have optimal development and have quality intelligence. Increasing the age of pregnancy and the increasingly enlarged stomach will cause discomfort, both in terms of physical and psychological (Murray-Davis et al., 2022). During pregnancy, pregnant women experience physical and psychological changes that can cause discomfort, mood changes and increased anxiety. Psychological changes of pregnant women in the third trimester include: pain again arises, the mother can't wait for the birth of her baby, increasingly wants to end her pregnancy, feel sad because she separated from the baby, feels lost attention, impatient and restless, dreaming and fantasizing about the baby, libido decreases (Kehler et al., 2022).

This can increase the psychological burden of the mother, can cause problems with the quality of the fetus contained and the complications that accompany the labor

process. Developmental origins of health and disease or fetal programming predict that exposure to adverse conditions during critical development periods has lifelong consequences that have implications for health and well-being (Takahashi et al., 2022).

But all that can still be overcome from the beginning of pregnancy until the mother prepares herself until the delivery process arrives. A mother will become more perfect if she can prepare for her pregnancy thoroughly, namely her body, mind and spirit (Kehler et al., 2022).

To make the mother comfortable during labor, the endorphine massage method relaxation method can be used very well in undergoing pregnancy. This method is one of the nonpharmacological management. Endorphine massage is a light touch/massage that is quite important given to pregnant women in the time leading up to childbirth. This is because massage stimulates the body to release endorphine compounds which are pain relievers and provide comfort to the mother (Ibrahim, 2021; Yu et al., 2022).

The results of research conducted by Ibrahim (2021), stated that the application of oxytocin massage can increase the production of breast milk in post partum mothers with  $p 0.005 < \alpha 0.05$ . The sample of this study was 20 people with a study duration of one month using the Wilcoxon

statistical test purposive sampling technique (Ibrahim, 2021)

The benefits of giving endorphines massage are controlling persistent pain and preventing the risk of preeclampsia in pregnant women, maintaining the potential for addiction to chocolate, controlling feelings of frustration and stress, regulating the production of growth hormones and sex, reducing symptoms due to eating disorders (Nurdin et al., 2021).

Based on the results of Yu's (2022) mentioned that the psychological readiness of pregnant women in the 3rd trimester in the face of labor before being given endorphine massage is with a ready category of 8.3% (3 people), the category is not ready as much as 55.6% (20 people), the category is not ready as much as 36.1% (13 people). Readiness of pregnant women after being given endorphine massage is with a ready type as much as 83.3% (30 people), the style is not prepared as much as 13.9% (5 people), the style is not ready as much as 2.8% (1 person). So in the study, there was a significant influence after the administration of Endorphine massage that affects the psychological readiness of pregnant women in the 3rd trimester in the face of childbirth (Yu et al., 2022).

The unpreparedness of the mother psychologically in the face of labor can impact the anxiety of pregnant women

primipara when the latent phase. This is based on the results of Yu's (2022) study stated that before muscle relaxation intervention, respondents with severe anxiety levels had the highest percentage of 73.3% (Yu et al., 2022).

Based on local area monitoring of maternal and child health recapitulation of Mataram city health in December 2018 for access to K4 services in 11 health centres in Mataram city, the highest K4 service picture in Mataram city area is, Puskesmas Karang Pule as much as 92.98%. Puskesmas Ampenan as much as 92.71% and Puskesmas Babakan as much as 91.48% (NTB Health Office, 2018).

Previous research has been done to increase and stimulate the hormone oxytocin by stimulating the nipples of the back and spine. (Hanifah & Hidayati, 2018; Rasyid, 2021; Zulfiana et al., 2021). Based on research by Rasyid (2021), stating that there is an effect of nipple stimulation on the duration of placental expulsion, the sample of 30 people consisting of 15 people in the intervention group with a duration of 7,07 minutes while the control group with a duration of 11,13 minutes controlled by sampling technique, research duration three months (Rasyid, 2021).

Previous research has also been done to reduce the intensity of low back pain in

pregnant women in the third trimester (Handayany et al., 2020).

Based on the research of Alza & Nurhidayat (2020), saying that there is an effect of endorphin massage on breast milk production in post partum mother with  $p$ -value  $0.0001 < \alpha 0.05$  whose research was carried out during for one month with a sample of 34 people using the Mann test purposive sampling technique Mann Whitney. So that by doing Endorphin massage it will create a comfortable and comfortable feeling so that it can reduce anxiety in mothers (Alza & Nurhidayat, 2020).

Based on the research of Nurhayati & Akbar (2021), states that there is an effect of giving warm compresses and endorphine massage to the incidence of adolescent dysmenorrhea by doing warm compresses on the back area for 5-7 minutes and continuing to do endorphin massage starting from the neck, touch or light massage using the fingertips forming a V outward towards the side of the ribs, down to the back ie on the thorax 10 to jumbal 1 which is done for 5 minutes. The number of samples is 16 people with purposive sampling technique (Nurhayati & Akbar, 2021).

In addition, endorphine massage can reduce pain in maternity mothers when I and dismnorhoe (Kamila & Fatmala, 2018; Nurhayati & Akbar, 2021).

In addition, the readiness of mothers to face labor can be influenced by the provision of guided imagery methods that can improve the mother's knowledge and attitude before delivery, according to the results of research conducted by Nurhidayati (2021), with the results of Mann Whitney's statistical test on the perspective of 0.019 (Nurhidayati & Madakusuma, 2021).

One of the factors related to the readiness of the mother to face labor is the support of the husband. From the results of research by Elvina's (2018), stating that there is a relationship between husband support and psychological readiness of pregnant women in the third trimester, the value of  $p$  0.009 is obtained with the number of respondents being 57 people with a study duration of 1 month using the Chi-square test (Elvina et al., 2018).

Gustina's research (2020), states that giving prenatal care yoga exercises affects the mother's physical and psychological readiness face labor with  $p$ -value  $< 0.000$ . This study uses a total sampling quota technique with a sample of 32 people carried out for 4 weeks (Gustina, 2020).

The difference between this research and the previous one is that previous research was conducted by giving yoga exercise to see the psychological readiness of the mother, giving endorphin massage with nipple stimulation while the research that

will be carried out is giving endorphin massage to the psychological readiness of primigravida mothers in facing labor.

The purpose of this study was to determine the effect of endorphine massage on the psychological readiness of third trimester primigravida pregnant women in facing labor.

## RESEARCH METHODS

This study uses a type of pre-experiment research design with one group pretest-posttest with analysis *Wilcoxon Signed Rank Test*. This method is given to a single group without a comparison group. To find out the effect of providing endorphine massage on the psychological readiness of pregnant women primigravida trimester III in getting labor in Puskesmas.

The population in this study is as many as 36 pregnant women, which is obtained from the results of a preliminary survey in the Puskesmas work area. So the sample in this study was 30 primigravida pregnant women with purposive sampling. The inclusion criteria were primigravida pregnant women with the third trimester and had no complications. Endorphine massage was done for 2 weeks before a night's rest.

The researcher gave endorphine massage to the respondent at the first time the research took place, then the researcher taught the respondent's family to do

endorphine massage to pregnant women at home everyday for two weeks. On the fifteenth day the researchers evaluated the psychological state of pregnant women.

## RESULT AND DISCUSSION

### Result

In this study, the number of pregnant women respondents studied as many as 30 pregnant women. The characteristics of pregnant women presented in this section include age, education, work. The results of features of pregnant women can be seen in the following table:

**Table 1 Distributed Frequency of Age Pregnant Women**

Age	n	%
<20	14	46.7
20-35	16	53.3
Total	30	100

Source : Primary Data

Based on table 1, obtained most respondents are in the age range of 20-35 years, which amounted to 16 people (53.3%) and for respondents aged <20 years, 14 people with (46.7%).

**Table 2 Distributed Frequency of Educational Pregnant Women**

Education	N	%
Basis	11	36.7
Intermediate	15	50.0
Tall	4	13.3
Total	30	100

Source : Primary Data

Based on table 2, respondents' education levels were dominated by mothers whose education level was 15 people with

(50.0%), and for the level of primary education as many as 11 people with (35.7%) and higher education levels as many as four people with (13.3%).

**Table 3 Distribution Frequency of Work of Pregnant Women**

Work	n	%
Not working	23	76.7
Work	7	23,3
Total	30	100

Source : Primary Data

Table 3 found that 23 mothers were out of work (76.7%) more than seven (23.3%) working people.

The results of this study were obtained by conducting interviews using questionnaire aids before intervening. The results of the survey can be seen in the table below:

**Table 4 Psychological Readiness of Pregnant Women in the Face of Labor Before Intervention**

Readiness	n	Min	Max	Mean	SD
Pre Test	30	10	20	16.10	2.670

Source : Primary Data

Based on table 4, it can be known that the 30 respondents whose psychological readiness before the intervention has a minimum value of 10 and a maximum value of 20.

**Table 5 Psychological Readiness of Pregnant Women in the Face of Labor After Intervention**

Readiness	n	Min	Max	Mean	SD
Post Test	30	15	20	18.53	2.047

Source : Primary Data

Based on table 5, it can be known that the 30 respondents whose psychological

readiness after the intervention has a minimum value of 15 and a maximum value of 20.

The results of this study were obtained by analyzing the effect of giving Endorphine massage on the psychological readiness of pregnant women primigravida trimester III in the face of persalinan in the working area of puskesmas. The results of the study can be seen in the table below:

**Table 6 Analysis of the Effect of Endorphine Massage on the Psychological Readiness of Pregnant Women in Facing Labor**

		n	Mean Rank	Sum of Ranks
Post Results	Negative Ranks	0 <sup>a</sup>	.00	.00
	Positive Ranks	25 <sup>b</sup>	13.00	325.00
	Ties	5 <sup>c</sup>		
Pre Results	Total	30		

Source : Primary Data

Based on table 6 obtained the value of pretest and post-test results about the psychological readiness of pregnant women, namely, post < pre results of 0 people, and for a post,> results of pre results as many as 25 people, as well as post results = pre results as many as five people. It can be known that the influence tested using the Wilcoxon test showed there was an effect of giving endorphine massage to the psychological readiness of pregnant women primigravida trimester III in the face of childbirth where the value of p-value 0.000 <0.05.

## Discussion

The results of this study indicate that there is an effect of endorphine massage on the psychological readiness of primigravida mothers in facing labor. After having endorphine massage for 14 days or (2 weeks) with  $p = 0.000 < \alpha = 0.05$ , which indicates there is an effect of endorphin massage on the psychological readiness of primigravida mothers in facing labor in the working area of the Mataram public health center. The same study was conducted on post partum mothers for one month with the results showing that endorphine massage increased milk production. (Alza & Nurhidayat, 2020).

After endorphin massage, the average psychological readiness of the mother was 18.53 and the difference in the average increase before and after endorphin massage was 2.047. Statistical test results obtained  $\rho = 0.000$ , meaning that endorphin massage is also effective in psychologically preparing the mother for labor. This research is in line with research conducted by Yu (2022), which shows there is an effect of endorphines massage on the psychological readiness of pregnant women primigravida trimester III (Yu et al., 2022).

Psychological changes of pregnant women in the third trimester include Discomfort re-arises, mothers can't waiting for the birth of the baby, increasingly wanting to

end the pregnancy, feeling sad because they separated from the baby, feeling lost attention, impatient and restless, dreaming and fantasizing about the baby, libido decreased (Kehler et al., 2022).

This can increase the psychological burden of the mother, can cause problems with the quality of the fetus contained and the complications that accompany the labor process. Developmental origins of health and disease or fetal programming predict that exposure to adverse conditions during critical developmental periods has lifelong consequences for health and well-being (Takahashi et al., 2022).

But all that can still be overcome from the beginning of pregnancy until the mother prepares herself until the delivery process arrives. A mother will become more perfect if she can prepare for her pregnancy thoroughly, namely her body, mind and spirit (Kehler et al., 2022).

To make the mother comfortable during labor, the Endorphine massage method relaxation method can be used very well in undergoing pregnancy. This method is one of the nonpharmacological management, and endorphine massage is a light touch/massage that is quite important given to pregnant women in the time leading up to childbirth. This is because massage stimulates the body to release Endorphines compounds which are pain

relievers and provide comfort to the mother (Yu et al., 2022).

Massage efflurage is effective in reducing back pain in pregnant women and effective in increasing Endorphine levels in pregnant women in the third trimester (Rahareng et al., 2022).

The changes in this study can be influenced by several characteristics, including age, education, work. This causes pregnant women to receive well the health education provided so that there is a change in the level of readiness of pregnant women in the face of childbirth.

During pregnancy, pregnant women experience physical and psychological changes that can cause discomfort, mood changes, and increased anxiety.

The benefits of giving Endorphines massage are controlling persistent pain, controlling the potential for addiction to chocolate, controlling feelings of frustration and stress, regulating the production of growth hormones and sex, reducing symptoms due to eating disorders.

Characteristics of pregnant women are used to determine the diversity of the traits or characteristics of pregnant women based on age, education, employment. Knowing the characteristics of respondents are expected to provide a general picture of the condition of pregnant women so that

the purpose of the study can be conveyed to respondents.

The late adult group is the group that experiences the most anxiety, because the period is a determination in achieving socioeconomic stability and obtaining a better degree of life, thus causing physical and psychological stress (Varanoske et al., 2022).

The age of 20-35 years is still in a productive period where the catch of a mother-to-be to any form of information conveyed will affect the mothers knowledge (Dewi & Suwanti, 2021; Wake et al., 2022).

According to The Theory of Notoatmodjo (2012), the level of education affects the psychological readiness of pregnant women. The higher the education, the easier it is for someone to face problems. Similarly, education can affect the learning process. The higher one's education, the easier it is to receive information. With higher education, a person will want to get information about things he does not know, both data from others and the mass media. The more information you get, the more knowledge is possessed. The better one's level of education, the better the mindset formed, thus making a person open to new things and receive information well (Purwanto, 2011).

The work environment can make a person gain experience and knowledge both

directly and indirectly. Homemakers can experience anxiety because if they experience pressure, the mother will feel it more often. There are no other activities that can distract the mother from the stress experienced. In contrast to, working mothers will more easily get access to information and knowledge because of interaction with the broader work environment, having a support group, and a change of atmosphere that is not only centred on the atmosphere at home (Wake et al., 2022).

Research conducted by Kehler (2022), showed that respondents who did not work amounted to 12 people (80%), in line with study conducted by Huhtaniemi & Laukkanen (2020), showed that respondents who did not work amounted to 37 people (88.1%). In addition, research conducted by Bellieni (2019), showed the results that respondents in intervention groups that did not work amounted to 9 people (60%) (Bellieni, 2019; Huhtaniemi & Laukkanen, 2020; Kehler et al., 2022).

Based on the results of the study obtained the highest and lowest average values, before and after being given the massage obtained is  $\rho = 0,000$  ( $\alpha < 0.05$ ), which means that the data is not normally distributed, then the Wilcoxon Signed Rank Test is used by the statistical test

results of  $\rho = 0,000$  ( $\alpha < 0.05$ ), it can be concluded that there is a Given Effect. Endorphine massage against psychological readiness of pregnant women primigravida trimester iii in facing labor in the working area of Puskesmas.

Researchers have limitations in conducting research. The limitation of the researcher is that the researcher cannot control the treatment and this study does not use a control group.

## **CONCLUSION**

Psychological readiness of primigravida pregnant women in the third trimester in facing labor can be influenced by being giving endorphine massage for 14 days.

Pregnant women can apply knowledge and practice at home with their partner or family about the endorphine massage.

For other researchers, they can develop research by adding research variables, namely about other factors that affect the psychological readiness of pregnant women, and help provide therapy to reduce pain at labor.

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