

DOI: <http://dx.doi.org/10.33846/hn40503>
<http://heanoti.com/index.php/hn>



RESEARCH ARTICLE

URL of this article: <http://heanoti.com/index.php/hn/article/view/hn40503>

The Influence of Endorphine Massage on Anxiety in Mothers During Their 3rd Trimester Pregnancy

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ABSTRACT

The 3rd trimester of pregnancy is the time for one to prepare both physiologically and psychologically for baby birth and nursing. The pregnancy during this final trimester causes inconvenience due to fetus and uterus enlargements. The pain during pregnancy and approaching the labor in pregnant mothers might increase their anxiety. One of attempts to reduce this anxiety resulting from pain in pregnant mothers employs nonpharmacologic method in the form of endorphin massage. This research was quasi experimental with one group pretest posttest design. It used analytical comparative research method since the researcher tried to study the existence of endorphin massage influence on anxiety in pregnant mothers. The results revealed that there was some mean differences before and after the therapy was given. The mean score before the therapy was given was 1.6 and after the therapy was given was 1.2. The difference between these two mean score was 0.4. From the analysis, it was found that the p-value was 0.037, meaning that there was a significant difference of anxiety level between before and after the provision of endorphin massage.

Keywords: endorphin; pregnancy; anxiety

INTRODUCTION

Pregnancy is a naturally physiological phenomenon experienced by a woman. It begins with a fertilization, i.e. when a man's sperm meet with egg cells or oocytes produced by the ovary. Upon fertilization, a new life is formed in the form of fetus which grows within the mother's uterus and this uterus is a safe and comfortable shelter for the fetus⁽¹⁾.

Pregnancy is something important in human life, and it has been a woman's fate to experience the series of pregnancy, labor and postnatal bleeding processes. The changes in women include those of physiological and psychological nature⁽²⁾. Pregnancy occurs in every woman who has healthy reproductive organs, experienced menstruation, and engaged in a sexual intercourse with a healthy man. It begins with conception until the baby is born which lasts for 40 weeks counted from the first day of the last menstruation. The pregnancy period is divided into 3 quarters. Quarter I starts from conception to three months; quarter II begins from the fourth to sixth months; and quarter III is counted from the seventh to ninth months⁽³⁾.

The 3rd trimester pregnancy is the time for physiological and psychological preparation for childbirth and baby nursing. The pregnancy during this last trimester causes inconvenience due to fetus and uterus enlargements. During this final stage of pregnancy, the mothers will usually experience constipation, insomnia, asphyxiation, and frequent urination. The 3rd trimester pregnancy begins when the pregnancy is 29 to 40-weeks old. This pregnancy they are having may cause psychical and physical changes⁽⁴⁾.

It is highly important for pregnant mothers to be aware of the changes occurring during pregnancy. The changes they experience include physical changes as characterized by weight gain, bulging stomach and enlarged breast. The changes in pregnant mothers will occur after fertilization process and they continue during pregnancy. These changes are responses to the fetus growing inside a mother's uterus. Nearly all changes experienced by a mother during pregnancy will return to their initial shapes prior to pregnancy after a when the

labor and breastfeeding processes are finished⁽⁵⁾. Pregnancy can cause a burden as they might feel marginalized and alienated and, eventually, it causes anxiety and stress.

Anxiety and stress are frequently found in anyone, particularly pregnant women. Anxiety is defined as an emotional state one subjectively experiences, and the object is sometimes even unclear. One can become anxious, yet the source and what he/she is anxious about cannot be actually seen⁽⁶⁾. Anxiety can occur when there is a response to one self, yet the responses each person makes are varied.

The responses to anxiety can be either positive or negative. The negative responses to anxiety can take such forms as one's unclear restlessness and uncertainty. Anxiety can cause physiological changes in the body. These physiological changes resulting from anxiety can be found and seen by others such as being trembling, sweating, increased heart rate, and they are followed by psychological changes, including panic, tensivity, confusion and hardness to concentrate⁽⁷⁾. When anxiety and stress are not immediately dealt with, they can result in abnormal birth and even maternal and fetal death.

Abnormal birth and maternal death are frequently-found cases. The maternal mortality rate (MMR) in Indonesia has reached 228 cases per 100,000 live births. The global challenge to achieve the 2015 MDGS' MMR targets is 102 per 100,000 births. Indonesia can only achieve 228 per 100,000 births currently. Therefore, the government needs to improve the health workers or midwives' quality and ability to suppress this high MMR⁽¹⁾.

Nowadays, MMR becomes a key indicator in public health degree. MMR indicates the number of women who die per 100,000 live births, of a death cause related to pregnancy disorder or its handling during pregnancy, labor and within postnatal bleeding period (42 days after giving birth), excluding the duration of pregnancy. Based on health center reports, the number of maternal deaths in Semarang Municipality in 2016 is 32 cases out of 26,337 live births or about 121.5 per 100,000 live births. The maternal death rate has actually declined from 35 cases in 2015 to 32 cases in 2016. Most of these mothers die of diseases (51%), including: brain tumors, bone cancer, lymph cancer, CHD, TB, mammary cancer and AIDS. Another cause of the death is sPE (21%), bleeding (12%), others (9.4%) and sepsis (6%)⁽⁸⁾.

The pain during pregnancy and approaching the labor in pregnant mothers might increase their anxiety. The attempts to reduce this anxiety resulting from pain in pregnant mothers employ pharmacologic and nonpharmacologic methods. The nonpharmacologic method one can use to reduce this anxiety is to give endorphin massage therapy. This endorphin massage is a light touching and messaging therapy which can normalize heart rate and blood pressure, as well as improve the relax condition within body through skin surface⁽⁹⁾. The endorphin massage process is fairly important for women with anxiety during pregnancy. Endorphin massage can help give calmness and convenience, both approaching and during the labor process⁽¹⁰⁾.

Maya Putri's research on endorphin massage to reduce anxiety level in pregnant mothers finds that mother's anxiety level before receiving endorphin massage is mostly at moderate anxiety level (51.4%). Mother's anxiety level after receiving endorphin massage is mostly mild (71.4%). The provision of endorphin massage has significant effect on primigravida pregnant mothers' anxiety level >36 weeks (p value = 0.000). Widiastini's research on endorphin massage to deal with anxiety in pregnant mothers conducted using statistical test find p value <0.005 and it is concluded that the influence of endorphin massage to reduce pregnant mothers's anxiety is significant.

Based on the problems above, the researcher identifies the problem in this research, i.e. "How is the influence of providing endorphin massage to deal with anxiety in mothers in their 3rd trimester pregnancy".

METHODS

This research was quasi experimental with one group pretest posttest design. The sample in this research was 10 pregnant mothers in their 3rd trimester. They were taken using total sampling technique. The independent variable in this research was endorphin massage, and the dependent variable was anxiety in mothers in their 3rd trimester pregnancy.

The massage was given while they sat and were accompanied by their husbands. The instrument used in this research was questionnaire on anxiety in pregnant mothers who were about to deliver. The instrument was Zung-Self Rating Anxiety Scale (ZSAS) to measure the anxiety level resulting from clinical disorder developed by William W.K Zung. This scale focused on the most commonly occurring disorders in general anxiety which had been adjusted to pregnant mothers in preparing for their labors. The questionnaire consisted of 20 statement items using Likert scale regarding signs of anxiety. The anxiety score ranged from 20 to 80, and classified as follows: 20-44 mild anxiety, 45-59 moderate anxiety, 60-80 high anxiety.

Prior to providing them with the massage, the anxiety questionnaire was distributed to these mothers. They were asked to come again once two weeks to receive the massage. Afterwards, after receiving the massage, the questionnaire was once again given to these mothers for evaluation purpose. Those who were willing to be involved in this research were asked to sign a letter of approval. They were told about what the

research was about, its objectives and procedures, and eventually an informed consent form was given to confirm their agreement to be the research subjects. The collected data were analyzed using paired sample t-test.

RESULTS

Table 1. Distribution of number of pregnancy

Number of pregnancy	Frequency	Percentage
First pregnancy	5	50
Second pregnancy	3	30
Third pregnancy	2	20
Total	10	100

From Table 1, it could be seen that the number of those with first pregnancy was 5 or half of the total respondents (50%).

Table 2. Distribution of anxiety frequency, before and after receiving endorphin message

Anxiety level	Before		After	
	n	%	n	%
Mild anxiety	4	40%	8	80%
Moderate anxiety	6	60%	2	20%
Total	10	100%	10	100%

From Table 2, it could be seen that there was a change in the anxiety level before and after receiving endorphin massage. Before receiving endorphin massage, 6 respondents (60%) had moderate anxiety and after receiving the massage 8 respondents (80%) had mild anxiety level.

Table 3. The difference of anxiety level between before and after receiving endorphin massage

Variable	Mean		t	p
	Before	After		
Anxiety	1.6	1.2	2.449	0.037

Table 3 indicated the mean difference before and after endorphin massage. The mean before the therapy was given was 1.6 and after the therapy was given was 1.2. The mean difference was 0.4. From the analysis result, it was found that the p-value was 0.037 (less than 0.05), meaning there was a significant difference of anxiety level between before and after receiving the endorphin massage.

DISCUSSION

This research result indicated that the ones experiencing anxiety were mostly those mothers who had their first pregnancy. Their anxiety was mostly moderate. This anxiety was due to their first experience of about to give birth, and those with second pregnancy said that they had a trauma of past unpleasant experience during

labor process. Those who were about to give birth for the first time would experience many problems just because they had no idea of the proper ways of doing things when actually they were all so simple⁽¹¹⁾.

Successive provision of endorphin massage could lower the anxiety level in pregnant mothers. Endorphin massage was a technique of lightly touching and massaging which could normalize heart rate and blood pressure, as well as improve the relax condition within the body through the skin surface⁽⁹⁾. The endorphin massage process was fairly important for women with anxiety during pregnancy. Endorphin massage could help give calmness and convenience, both approaching and during the labor process⁽¹²⁾. Anxiety could occur due to many factors which gave some pressure to one's life. Facing the labor process was one factor which might cause anxiety, considering that the process of giving birth to a baby did not necessarily somatic in nature, rather it could also be psychosomatic, since many psychical elements also influenced the smoothness or delay of this process of giving birth to a baby. The event which was accompanied by much physical sufferings and uncertainty when giving birth to a baby also simultaneously caused great deal of tensity, fear, anxiety and other important emotions.

CONCLUSION

There was a change in the anxiety level before and after the endorphin massage was given. Prior to receiving endorphin massage, the anxiety level was moderate and it turned to mild anxiety in more than a half of the total respondents.

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