



The Effect of Endorphin Massage on Reducing Anxiety in Third-Trimester Pregnant Women in Purwakarta Regency, Indonesia

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ABSTRACT

Anxiety is an emotion commonly experienced by pregnant women, especially in the third-trimester. Anxiety can disrupt the physical and mental health of pregnant women and can have a negative impact on fetal development. Endorphin massage is a therapy that can be used to reduce anxiety in pregnant women. This study aims to determine the effect of endorphin massage in reducing anxiety in third-trimester pregnant women in Purwakarta Regency, Indonesia. This research uses a quasi-experimental research design with a pre-test and post-test approach. The research sample consisted of 60 third-trimester pregnant women who were divided into two groups, namely the treatment group (30 people) and the control group (30 people). The treatment group received endorphin massage therapy for 30 minutes 10 times, while the control group received no therapy. Anxiety data was measured using the state-trait anxiety inventory (STAI) questionnaire. The results showed that there was a significant difference in anxiety between the treatment group and the control group after receiving therapy ($p < 0.05$). Anxiety in the treatment group decreased significantly after receiving therapy, while anxiety in the control group did not change. Based on the results of this study, it can be concluded that endorphin massage is effective in reducing anxiety in third-trimester pregnant women.

1. Introduction

Anxiety is an emotion commonly experienced by humans, including pregnant women. In the third trimester, there is an increase in levels of the hormones estrogen and progesterone, which can cause mood changes, including anxiety. Pregnant women who experience stress, both physical and psychological stress, can be more susceptible to experiencing anxiety. Physical stress can be caused by pregnancy conditions, such as nausea, vomiting, back pain, and sleep disorders. Psychological stress can be caused by various factors, such as economic problems, household relationships, or fear of childbirth. Fear of childbirth is one of the most common causes of anxiety in pregnant women. This fear can be caused by a variety of factors, such as a

bad birth experience, misinformation about childbirth, or a lack of support from a partner or family.^{1,2}

Anxiety in pregnant women can disrupt the physical and mental health of pregnant women and can have a negative impact on fetal development. Anxiety can make it difficult for pregnant women to sleep. Lack of sleep can increase the risk of pregnancy complications, such as preeclampsia and premature birth. Anxiety can cause the body's muscles to become tense, including the back muscles. Back pain can interfere with pregnant women's activities and cause discomfort. Anxiety can cause an increase in blood pressure. High blood pressure in pregnant women can increase the risk of pregnancy complications, such as preeclampsia and premature birth. Anxiety can cause the placenta to not develop properly. A placenta that



does not develop properly can disrupt the supply of nutrients and oxygen to the fetus, which can increase the risk of pregnancy complications, such as premature birth and low birth weight. Anxiety can increase the risk of premature birth. Premature birth can cause various complications in babies, such as respiratory problems, infections, and developmental abnormalities. Anxiety can cause babies to be born with low birth weight. Babies with low birth weight are more susceptible to various health problems, such as infections, respiratory problems, and developmental abnormalities.^{3,4}

Endorphin massage is a therapy that can be used to reduce anxiety in pregnant women. Endorphin massage is a therapy that uses massage to release endorphin hormones. Endorphin is a hormone that has analgesic, anti-inflammatory, and relaxing effects. Endorphin massage can increase the production of endorphin hormones. Endorphin hormones have analgesic, anti-inflammatory, and relaxing effects. The analgesic effect of endorphins can reduce pain, which can cause anxiety. The anti-inflammatory effects of endorphins can reduce inflammation, which can cause anxiety. The relaxing effect of endorphins can make pregnant women feel more relaxed and calm. Endorphin massage can increase blood flow throughout the body, including the brain. Increasing blood flow to the brain can improve brain function, including emotional regulation function. Endorphin massage can increase the bond between mother and fetus. Massage performed on a pregnant woman's stomach can stimulate the fetus and make the fetus feel comfortable.^{5,6} This study aims to determine the effect of endorphin massage in reducing anxiety in third-trimester pregnant women in Purwakarta Regency, Indonesia.

2. Methods

This research uses a quasi-experimental research design with a pre-test and post-test approach. This design is used to compare differences between two groups, namely the treatment group and the control group. The research sample consisted of 60 third trimester pregnant women who were divided into two groups, namely the treatment group (30 people) and the control group (30 people). The treatment group received endorphin massage therapy for 30 minutes 10 times. Endorphin massage therapy is carried out by an experienced therapist. Therapy is carried out by massaging the pregnant woman's entire body, including the stomach, back and legs. The control group received no therapy. Anxiety data was measured using the state-trait anxiety inventory (STAI) questionnaire. The STAI is a questionnaire consisting of 40 items that measure general anxiety (state anxiety) and persistent anxiety (trait anxiety). The research results were analyzed using the paired t-test statistical test to compare the treatment group and the control group. This statistical test is used to test the hypothesis that there is a significant difference between the two groups.

3. Results and Discussion

The results showed that there was a significant difference in anxiety between the treatment group and the control group after receiving therapy ($p < 0.05$). Anxiety in the treatment group decreased significantly after receiving therapy, while anxiety in the control group did not change (Table 1). The results of this study show that endorphin massage is effective in reducing anxiety in third-trimester pregnant women. This is in accordance with previous research, which shows that endorphin massage can reduce anxiety in pregnant women.



Table 1. Comparison of STAI scores between treatment groups.

Group	Pre-test	Post-test
Treatment	48,5 ± 8,7	38,2 ± 6,8
Control	48,3 ± 9,0	48,4 ± 9,1

Anxiety is an emotion commonly experienced by pregnant women, especially in the third trimester. Anxiety in pregnant women can be caused by various factors, including hormonal changes, stress, and fear of childbirth. Endorphin massage is a therapy that can be used to reduce anxiety in pregnant women. Endorphin massage is a therapy that uses massage to release endorphin hormones. Endorphin hormones have analgesic, anti-inflammatory and relaxing effects. Endorphin massage can reduce anxiety in pregnant women by releasing endorphin hormones. Endorphin hormones are produced by the brain and central nervous system. This hormone has a variety of effects, including: Analgesic: reduces pain; Anti-inflammatory: reduces inflammation and Relaxation: relaxes the body and mind.⁷⁻⁹

The analgesic effect of endorphins can reduce pain that can cause anxiety. Pain is one of the factors that can trigger anxiety. Pain can be caused by various things, such as hormonal changes, back pain, and Braxton Hicks contractions. Endorphin massage can reduce pain by stimulating the body to release endorphin hormones. Endorphin hormones have an analgesic effect that can reduce pain. The anti-inflammatory effects of endorphins can reduce inflammation, which can cause anxiety. Inflammation is the body's response to injury or infection. Inflammation can cause various symptoms, such as pain, swelling, and fever. Endorphin massage can reduce inflammation by stimulating the body to release endorphin hormones. Endorphin hormones have anti-inflammatory effects that can reduce inflammation. The relaxing effect of endorphins can make pregnant women feel more relaxed and calm. Relaxation is an important factor in reducing anxiety.

Endorphin massage can make pregnant women feel more relaxed by stimulating the body to release endorphin hormones. Endorphin hormones have a relaxing effect that can relax the body and mind.¹⁰⁻¹²

4. Conclusion

Endorphin massage is an effective therapy for reducing anxiety in pregnant women. Endorphin massage can reduce anxiety by releasing endorphin hormones which have analgesic, anti-inflammatory and relaxing effects.

5. References

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