

Effect Endorphin Massage on Anxiety Labor Levels of First Stage

Anis Nikmatul Nikmah^{1*}, Dhita Kris Prasetyanti¹, Eko Winarti¹, Karima Meireza²,
Hiromi Ogasawara³

¹Faculty of Sciences, Kadiri University, Kediri, Indonesia

²Midwifery Study Program, Faculty of Health Sciences, Kadiri University, Indonesia

³Nagoya City University, Nagoya, Japan

*Corresponding author: anisnikmatul@unik-kediri.ac.id

ABSTRACT

Background: Endorphin massage stimulates the body to release endorphin compounds; these hormones can create a sense of comfort thereby reducing anxiety.

Purpose: The purpose of this study was to prove the effect of endorphin massage on the anxiety level of the first stage of maternal I. Pre-experimental research design with one group pretest-posttest design. The population of all mothers in childbirth I.

Methods: The sample size was 16 respondents, the accidental sampling technique. Data collection uses observation sheets. Endorphin massage by the husband for 10 minutes, massage performed for 20 minutes in 1 hour and every 10 minutes in 30 minutes at the time of contraction. Data analysis using paired t test.

Results: The results showed that before giving endorphin massage, the average respondent experienced severe anxiety (30.00). Whereas after being given an endorphin massage the average respondent experiences moderate anxiety (26,19). The value of $p = 0,000$ is the effect of endorphin massage on the level of anxiety of the first stage of labor.

Conclusion: Massage through the skin surface during labor will improve the relaxed condition in the body so that it triggers a feeling of comfort.

Keywords: anxiety, endorphin massage, first stage, maternity mother

Received March 10, 2022; Revised April 1, 2022; Accepted April 29, 2022

DOI: <https://doi.org/10.30994/jnp.v5i2.219>



The Journal of Nursing Practice, its website, and the articles published there in are licensed under a Creative Commons Attribution-Non Commercial-ShareAlike 4.0 International License.

BACKGROUND

Childbirth is a tense and worrying event, because in this event one of the most intense sources of pain that is known is mainly due to uterine contractions (Cheung et al., 2007) (Surucu et al., 2018). Nearly 80% of women express worries and fears related to pregnancy or during labor (Rondung et al., 2016). During labor emotional stress and pain can negatively impact physiological contractions and interfere with labor (Boaviagem et al., 2016). This can trigger emotional stress and anxiety disorders (N et al., 1978). Anxiety is an individual response to an unpleasant situation experienced by all living things in everyday life (Fassaie & Mcaloon, 2019). It is well known that emotional increases stimulate secretion of ketocolamine and cortisol (N et al., 1978) . The impact of excessive release of catecholamine and steroid hormones can cause increased blood pressure, unstable emotions, decreased uteroplacental circulation, reduced blood flow and oxygen to the uterus, the onset of uterine ischemia which causes more painful impulses and decreased uterine contractions (Williams et al., 2019).

If the impact is paused it will affect the welfare of the mother and fetus and result in death How to overcome anxiety in childbirth by using pharmacological and non-pharmacological therapies. Pharmacologically through the use of drugs while non-pharmacologically without the use of drugs such as relaxation, acupressure, acupuncture, hot or cold compresses and massage (Simkin & Bolding, 2004). Massage has been found to reduce anxiety in labor. Massage is a physical manipulation of soft tissue, such as applying light pressure, fixed or moving, holding and moving muscles and body tissues (Al-yousef et al., 2019). Massage stimulates endorphin production and reduces blood pressure through effects on the parasympathetic system (Bastard & Tiran, 2009). Endorphin reduces transmission of signals between nerve cells to reduce pain and reduce discomfort in the form of a decrease in the hormone cortisol (N et al., 1978). Other benefits are obtained for pain relief, rehabilitation of sports injuries, stress reduction and overcoming psychological disorders, massage is the most common form of complementary and alternative therapy used throughout the world (Sherman et al., 2010). Research that shows massage therapy can be applied to overcome psychological well-being (Williams et al., 2019). Various techniques have been proposed to relieve anxiety and pain in labor including massage therapy. Endorphin massage releases endorphin compounds which are a trigger for calmness and reduce pain; massage through the skin surface which is done during labor will improve the relaxed condition in the body so that it triggers a feeling of comfort.

OBJECTIVE

The purpose of this study was to prove the effect of endorphin massage on the anxiety level of the first stage of maternal I.

METHODS

This study uses pre-experimental design with the one group pretest-posttest design method. The population of all mothers in childbirth I. The sample size was 16 respondents, the accidental sampling technique. Data collection uses observation sheets. This research was conducted by giving treatment to first-time mothers without complications of 16 maternal women. The treatment given was an endorphin massage conducted by a husband who had previously observed maternal anxiety levels before. Endorphin massage is performed for 20 minutes every 1 hour and when the contraction is carried out for 10 minutes in 30 minutes then measures maternal anxiety. The analytical method used by the analysis to identify

differences in the level of anxiety of the first stage of maternal active phase before and after the administration of endorphin massage (in pairs) is a paired t analysis technique.

RESULTS

This study starts from identifying the anxiety level of the first stage of maternity mothers who have not been treated with endorphin massage, then identifying the level of anxiety after treatment. Observation results are shown in the following table:

Table 1. Level of anxiety of the first stage of maternal pregnancy before endorphin massage

Anxiety	N	Minimum	Maximum	mean	Std. Device
Anxiety pre test	16	24	35	30.00	2.966
Valid N (listwisw)	16	100%			

The average anxiety in the first stage of labor of the active mother before being given an endorphin massage is 30.00. This shows that the average maternity mothers experience severe anxiety.

Table 2. Levels of anxiety in the first stage of maternity after an endorphin massage

Anxiety	N	Minimum	Maximum	mean	Std. Device
Anxiety pre test	16	20	30	26.19	2.857
Valid N (listwisw)	16	100%			

The average anxiety in the first stage of labor during the active phase after an endorphin massage was 26.19. This shows that on average mothers experience moderate anxiety.

Table 3. Analysts' Influence of Maternal Anxiety Level I before and after endorphin massage

Variabel	Statistik	Pre	Post	p-value
Anxiety	Mean	30.00	30	< 0.001
	Minimum	24	20	
	Maximum	35	30	
	Std. Device	2.966	2.857	

DISCUSSION

Endorphin massage is one of the non-pharmacological therapies to reduce or alleviate anxiety in women who will give birth. Less pain will reduce anxiety (Simkin & Bolding, 2004) Endorphin massage techniques can give individuals self-control when discomfort or anxiety, physical and emotional causes caused by anxiety. This happens because massage stimulates the body to release endorphin compounds which are natural pain relievers (Maesaroh, 2019). Endorphin massage carried out in the back of the direction of the right and left shoulders forming the letter V for 20 minutes can control the pain that persists, control the feeling of stress and boost the immune system (Aprillia, 2010). states that endorphin can increase oxytocin, a hormone that facilitates labor so as to reduce pain. Endorphin massage can control persistent pain, control feelings of stress and boost the immune system. Endorphin levels differ from one person to another. This causes pain and anxiety every person is different. Endorphin massage is a gentle and gentle way to help mothers feel more refreshed, more relaxed, and comfortable during labor. Endorphin massage also helps mothers feel closer to the people caring for them (Robert Noah Calvert, 2002).

Based on the research mentioned that massage can improve sleep quality and calmness in children (Mindell et al., 2017). Massage is used as an alternative treatment for anxiety (Sherman et al., 2010). Massage on the back in patients with liver transplant that positively influences vital signs, decreases the severity of pain and increases comfort (Demir & Saritas, 2019). Endorphin can be trusted to produce four keys for the body and mind, namely increasing the immune system / immunity, reducing pain, reducing stress, and slowing down the aging process (Aprillia, 2010). Endorphin levels differ from one person to another. This causes everyone's anxiety to be different. But by giving endorphin massage at least it has given care for the love of maternity so that maternal anxiety levels can be reduced even if only using a simple method with a smaller risk.

CONCLUSION

Endorphin massage is one of the most important therapeutic touches or light massages given before delivery until delivery. Endorphin compounds produced from the therapy is a pain reliever and can create a feeling of comfort. So that mothers can face a comfortable delivery process and mothers are not afraid and anxious about labor. Endorphin massage that is performed on maternal will cause a sense of calm with the touch or massage of the tense nervous system will become more relaxed. This makes it possible to reduce the anxiety felt by the mother.

REFERENCES

- Al-yousef, H. M., Wajid, S., & Sales, I. (2019). Journal of Ayurveda and Integrative Medicine Short Communication A community-based survey on massage therapy in Saudi Arabia. *Journal of Ayurveda and Integrative Medicine*, *xxxx*, 2–5. <https://doi.org/10.1016/j.jaim.2019.10.002>.
- Aprillia, Y. (2010). *Hipnostetri : rilek, aman dan nyaman saat hamil dan melahirkan* (sandra sabastian dan resita wahyu Febiarti (ed.); pertama). transmedia.
- Bastard, J., & Tiran, D. (2009). Complementary Therapies in Clinical Practice Reprint of: Aromatherapy and massage for antenatal anxiety: Its effect on the fetus q. *Complementary Therapies in Clinical Practice*, *15*(4), 230–233. <https://doi.org/10.1016/j.ctcp.2009.06.010>.
- Boaviagem, A., Junior, E. M., Lubambo, L., Sousa, P., Aragão, C., Albuquerque, S., & Lemos, A. (2016). SC. *Complementary Therapies in Clinical Practice*. <https://doi.org/10.1016/j.ctcp.2016.11.004>.
- Cheung, W., Registered, R. M., & Ip, W. (2007). *Maternal anxiety and feelings of control during labour : A study of Chinese first-time pregnant women*. 123–130. <https://doi.org/10.1016/j.midw.2006.05.001>.
- Demir, B., & Saritas, S. (2019). Effects of massage on vital signs , pain and comfort levels in liver transplant patients. *EXPLORE*, *000*, 1–7. <https://doi.org/10.1016/j.explore.2019.10.004>.
- Fassaie, S., & Mcaloon, J. (2019). Psychoneuroendocrinology Maternal distress , HPA activity , and antenatal interventions : A systematic review. *Psychoneuroendocrinology*, *October*, 104477. <https://doi.org/10.1016/j.psyneuen.2019.104477>.
- Maesaroh, S. (2019). *pengaruh endorphin massage terhadap tingkat kecemasan ibu bersalin multipara kala I. 1*, 231–237.
- Mindell, J. A., Lee, C., Leichman, E. S., & Rotella, K. N. (2017). Impact on sleep and mood in infants and mothers. *Sleep Medicine*. <https://doi.org/10.1016/j.sleep.2017.09.010>.
- N, R. P. L. R., Ph, D., D, E. L. E., D, B. A. W. J. M., & D, D. S. M. P. (1978). The

- relationship of maternal anxiety , plasma catecholamines , and plasma cortisol to progress in labor. *The American Journal of Obstetrics and Gynecology*, 132(5), 495–500. [https://doi.org/10.1016/0002-9378\(78\)90742-1](https://doi.org/10.1016/0002-9378(78)90742-1).
- Robert Noah Calvert. (2002). *The History of Massage: An Illustrated Survey from Around the World* (2nd ed.). healing art press.
- Rondung, E., Thomtén, J., & Sundin, Ö. (2016). Psychological perspectives on fear of childbirth. *Journal of Anxiety Disorders*, 44, 80–91. <https://doi.org/10.1016/j.janxdis.2016.10.007>.
- Sherman, K. J., Ph, D. M. P. H., Ludman, Ñ. E. J., Ph, D., Cook, A. J., Ph, D., Hawkes, R. J., Roy-byrne, P. P., Bentley, S., Brooks, M. Z., Cherkin, D. C., & Ph, D. (2010). *GENERALIZED ANXIETY DISORDER: A RANDOMIZED*. 450, 441–450. <https://doi.org/10.1002/da.20671>.
- Simkin, P., & Bolding, A. (2004). *Update on Nonpharmacologic Approaches to Relieve Labor Pain and Prevent Suffering*. 489–504. <https://doi.org/10.1016/j.jmwh.2004.07.007>.
- Surucu, S. G., Ozturk, M., Vurgeç, B. A., Alan, S., & Akbas, M. (2018). *AC. Complementary Therapies in Clinical Practice*. <https://doi.org/10.1016/j.ctcp.2017.12.015>.
- Williams, N. A., Burn, J. M., Springer, P., Wolf, K., & Buster, T. (2019). *Complementary Therapies in Clinical Practice Therapeutic massage to enhance family caregivers ' well-being in a rehabilitation hospital*. 35(November 2018), 361–367. <https://doi.org/10.1016/j.ctcp.2019.03.020>.