

PROVIDING WARM COMPRESSES FOR BACK PAIN IN 3RD TRIMESTER PREGNANT WOMEN

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ABSTRACT

This study aims to determine the effect of warm compresses on Low Back Pain in pregnant women in Trimester III at the Bunda Sehat Clinic, Cijantung, Jakarta. The method used in this research is quasi-experimental with pre and post-test design with the control group. The research results show that the average Low Back Pain in Trimester III pregnant women before being given warm compresses was 6.1 (moderate pain), and after being given warm compresses was 2.9 (mild pain). There is an effect of warm compresses on Low Back Pain in pregnant women in the third trimester at the Bunda Sehat Clinic, Cijantung, Jakarta, with a p-value of 0.000. Conclusion Warm compresses affect reducing Low Back Pain for third-trimester pregnant women at the Bunda Sehat Clinic, Cijantung, Jakarta.

Keywords: Pregnancy, Warm Compresses, Low Back Pain

INTRODUCTION

Pregnancy is a condition of a woman who is pregnant for nine months to increase the fetus in her womb (Sari et al., 2020). Pregnancy is a condition where the meeting of egg cells between sperm cells meets and is continued with physiological and psychological changes. Normal pregnancy duration is 280 days or 40 weeks or 9 months 7 days which is calculated from the first day of the last menstruation (Ridawati et al., 2020).

The gestation period starts from conception to the birth of the fetus. The normal gestation period is 280 days. Pregnancy is divided into 3 trimesters, namely the first trimester from conception to 3 months (0-12 weeks), the second trimester from 4 months to 6 months (12-28 weeks), the third trimester from 7 to 9 months (28 months -40 weeks) (Saifuddin, 2020).

Various problems that arise in the third trimester of pregnancy are psychological problems that are often complained of by pregnant women such as back pain, but back pain can also cause poor sleep quality. Back pain during pregnancy occurs in the lumbosacral area, because the pain intensity increases with increasing gestational age due to a shift in the center of gravity and changes in body posture (Yuliania et al., 2021).

The prevalence of lower back pain or low back pain has not been recorded with certainty, however, various studies, both international and national, state that low back pain often occurs in the third trimester of pregnancy. The incidence of Low Back Pain in pregnant women worldwide is estimated that 50-60% of pregnant women experience new back pain during pregnancy and in non-pregnant women aged 35 years, the figure is only 15% (Bryndal ., 2020). The prevalence of pregnant women in Indonesia has been found in several studies, such as Fatmawati et al., (2017) which stated that the prevalence of low back pain in Indonesia is 18%. The prevalence of low back pain increases with age and is most common in the middle and early four decades. Furthermore, in Apriliyanti Mafikasari's research, Ratih Indah Kartikasari, (2015) stated that the results of research on pregnant women in various regions of Indonesia reached 60-80% of people who experienced lower back pain during their pregnancy. Then data on the prevalence of pregnant women experiencing Low Back Pain in Jakarta in Lestari's research (2020) reached 5.3% of the total number of pregnant women 5,291,143 people.

According to data obtained at the Bunda Sehat Clinic in Cijantung, in 2022 the number of pregnant women who visited reached 385 people, of which there were 217 complaints of low back pain pregnancy, while in the January-April period visits of pregnant women reached 157 people, of these 134 people (84.7%) experienced Low Back Pain. Pregnant women said that their complaints of back pain accompanied by aches, as many as 16 of them had to do bed rest because they experienced back pain which caused physical and emotional fatigue and disrupted their daily activities, so the problem in this study was that there were still many pregnant women who experienced back pain.

Lower back pain is discomfort that occurs below the rib cage and above the inferior gluteal region (Hanifah et al., 2022; Sari et al., 2020). Back pain will hinder pregnant women's activities. Pregnant women with back pain will have difficulty walking when the pain spreads to the pelvis. If not treated properly, it can cause chronic back pain which will be more difficult to treat or cure (Aulianisa et al., 2023; Rasyid & Igrisa, 2019). Warm compresses for pregnant women with back pain can use warm temperatures locally which can have physiological effects including softening fibrous tissue, relaxing body muscles, eliminating pain, and improving blood flow in pregnant women (Komariyah & Widyastuti, 2022; Ridawati & Fajarsari, 2020).

Lower back pain will sometimes radiate to the pelvis, thighs and down the legs, sometimes increasing tenderness over the symphysis pubis. This will make pregnant women experience difficulties in carrying out activities, standing up after sitting, moving from a seat, sleeping and others. Pain can be managed with pharmacological and non-pharmacological therapy. Pharmacological pain control is indeed more effective than non-pharmacological methods, however, pharmacology is more expensive and has the potential to have side effects. Pharmacological methods also have an influence in pregnancy for the mother, fetus, and for the progress of labor. This is in accordance with research Amalia et al., (2020) which states that there was a decrease in the pain scale before and after applying a warm compress from 4.53 to 3.07 with a difference between 1.46.

One of the non-pharmacological methods that can reduce or relieve pain, reduce or prevent muscle spasms, provide a sense of comfort, namely with warm compresses (Andreinie, 2016). Warm compresses are one of the non-pharmacological strategies to treat back pain. The use of warm compresses is highly recommended for back pain problems because they are easy to do and inexpensive. Warm compresses are beneficial for pregnant women because they can provide a feeling of warmth to meet the need for comfort, reduce or relieve pain (Aulia, 2018).

Seeing from several previous studies that several therapies used to reduce pain include kinesiotaping, acupressure, effleurage massage. These three interventions require difficult tools and the help of others, while warm compresses are easy to do and can be done alone. According to Amalia's et al., research (2020) compressing with a bladder has a significant effect. This provides comfort and a sense of security because it uses a jar with an appropriate temperature (38-40°C) with a temperature that has been set in such a way that it is not too hot and irritates the skin.

Suryanti et al., (2021) in his research said Back pain is often felt by pregnant women at night, efforts to reduce the pain are carried out warm compresses are done 2 times a day in the morning and evening / evening, in the morning before doing activities, while at night the mother experiences pain again before going to bed.

RESEARCH METHODS

This research was conducted by applying a quasi-experimental research method with a pre and post test design with a control group. The sample in this study were pregnant women in their third trimester who visited the Bunda Sehat Clinic in Cijantung. The sampling technique used to calculate the sample size was 20 case groups and 20 control groups. The data collection steps in this study were carried out directly to the respondents to intervene and measure pain. The data collection steps in this study were carried out directly to the respondents to intervene and measure pain using the NRS (Numeric Rating Scale) observation format to assess the Low Back Pain pain scale then the data was analyzed with *paired test test*.

RESEARCH RESULT

Table. 1
Differences in the Low Back Pain Pain Scale in the Intervention Group
and the Control Group in Third Trimester Pregnant Women

Group	n	intervention	control	P
		Mean ± D.S	Mean ± D.S	
Pre-Test <i>Pain level before warm compresses</i>	20	6.1 ± 0.75	6.05 ± 0.99	0.910
Post-Test <i>Pain level after warm compresses</i>	20	2.9 ± 0.60	4.40 ± 0.75	0.000

First, in the control group the mean pre-test pain scale score was 6.05 mg/dL, and the standard deviation was 0.99 mg/dL. Then the average value of the pain scale in the post test was 4.40 mg/dL, and the standard deviation was 0.75 mg/dL.

Second, in the intervention group the average pain scale score before warm compresses was 6.1 mg/dL with a standard deviation of 0.75 mg/dL. Then after the intervention the average value of the pain scale was 2.9 mg/dL, and the standard deviation was 0.60 mg/dL.

Third, based on the Independent T-test, the average pain value in the intervention group was smaller than the control group. The pre-test obtained a p-value of 0.910 (> 0.05), so it can be concluded that there was no difference in pain scores between the intervention and control groups. The post test results obtained a p value of 0.000 (< 0.05), so it can be concluded that there is a difference in the average morbidity rate between the intervention group and the control group.

DISCUSSION

Lower back pain in pregnancy occurs due to the growth of the uterus which causes a change in the posture of the pregnant woman resulting in increased pressure on the curvature of the spine, there is a tendency for the lower back muscles to shorten. This situation triggers the release of chemical mediators such as prostaglandins from damaged cells, bradykinin from plasma, histamine from mast cells, serotonin from platelets. The increase in these mediators makes the sympathetic nerves stimulated. Fast pain is triggered by mechanical or thermal type receptors (ie A-Delta nerve fibers), whereas slow pain (slow pain) is usually triggered by C nerve fibers). The A-Delta nerve fibers have the characteristic of transmitting pain quickly and are myelinated, and the unmyelinated C nerve fibers,

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The use of warm compresses for areas that are tense and painful is considered to be able to relieve pain. Warmth reduces muscle spasm caused by ischemia which stimulates neurons which block further transmission of pain stimuli causing vasodilation and increased blood flow to the area being compressed. The compression

area is in the lumbosacral area, which is located above the sacrum bone. The lumbosacral area has a major role, namely supporting body weight (Tri 2018).

Amalia et al., (2020) statistical analysis results show that $p \text{ value} = 0.001 < \alpha (0.05)$ so it is found that warm compresses are effective in reducing the intensity of back pain in third trimester pregnant women. Warm compresses can be recommended as a complementary therapy for back pain. Furthermore, in Yuspina's study (2018) the intensity value of back pain in the warm compress treatment was 1.61, there was a difference in the level of pain before and after the warm compress was applied. The research results of Yuliana et al., (2023) show that giving warm compresses can reduce the intensity of back pain in trimester pregnant women III. Based on research conducted by Fauziah et al., (2020), there was a change in the pain scale of pregnant women in the third trimester after prenatal yoga. Prenatal Yoga adapts to physiological changes in body posture due to pregnancy so that regular exercise can reduce back pain in third trimester pregnant women (Suhaida et al., 2023).

The results of this study are in accordance with previous findings regarding the effect of warm compresses in reducing Low Back Pain pain. As in Suryanti's et al., research (2021), from the results of bivariate analysis, it was found that there was an effect of warm compresses on the level of back pain in third trimester pregnant women and obtained a $p\text{-value} = 0.000 (p < 0.05)$. Putri (2023) showed that there was a decrease in back pain before and after with a difference of 2.97 and obtained a significant result of 0.000 which was smaller than the 5% significance level ($p\text{-value} = 0.000 < 0.05$), so the conclusion was that H_a was accepted, which means there is Effect of warm compresses on back pain in third trimester pregnant women.

This is because warm water has a physiological impact on the body, namely softening fibrous tissue, affecting tissue oxygenation so as to prevent muscle stiffness, vasodilation and improving blood flow, so as to reduce and relieve pain. The duration of using a warm compress is 15-20 minutes. Warm water compresses on the painful area are considered to be able to relieve pain. Compresses are done 1-2 times a day for 15-20 minutes which can be done while lying on your side, sitting or half sitting. Warmth relieves muscle spasm caused by ischemia stimulating neurons that block further transmission.

Based on some of these descriptions, it can be stated that warm compresses have an effect on reducing back pain in pregnant women. One of the non-pharmacological methods that can reduce or relieve pain, reduce or prevent muscle spasms, provide a sense of comfort, namely with warm compresses.

Based on the results of the study, the average Low Back Pain pain scale in the intervention group after being given warm compresses was 2.95 (mild), then the pain scale in the control group was 4.40 (moderate pain). so that there is an average difference in the reduction of the Low Back Pain pain scale of 1.45 points. The independent test results obtained a $p \text{ value}$ of 0.000, which means that there is an effect of warm compresses on Low Back Pain for third-trimester pregnant women at the Bunda Sehat Clinic, Cijantung, Jakarta 2023.

CONCLUSION

There were differences in the Low Back Pain pain scale in the intervention and control groups of third-trimester pregnant women at the Bunda Sehat Clinic, Cijantung, Jakarta, with a p value of 0.000. So it can be concluded that there is an influence warm compresses to reduce back pain in pregnant women.

SUGGESTION

This research is expected to be able to provide education for pregnant women and health workers in the management of low back pain and this warm compress can be done continuously.

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