p-ISSN: 2089-6778
e-ISSN: 2549-5054

EFFECTIVENESS OF WARM COMPRESS IN REDUCING LOW BACK PAIN DURING THE THIRD TRIMESTER

Melsa Sagita Imaniar[1)], Sri Wahyuni Sundari[2)]
Email; melsa.sagita@umtas.ac.id[1)], sri.wahyuni@umtas.ac.id[2)]
[1,2]Midwifery Diploma Program, Health faculty of Muhammadiyah Tasikmalaya University KM 2.5 Tamansari Street tasikmalaya

ARTICLE INFORMATION

Received:
March 03, 2020

Revised:
June 02, 2020

Accepted:
June 17, 2020

Available Online:
June 29, 2020

Abstract

Pregnant women, 90% experienced low back pain during their pregnancy. When the pain is not treated, it triggers mothers' stress, which affects their sleep, which could worsen the pain. Low-back pain during pregnancy caused by changes in anatomical, hormonal, and stressful structures. There were variations in treating low-back pain during pregnancy, and one of them was using a warm compress. It helped bring out a sense of comfort, reducing pain, reducing and preventing muscle spasms, and giving a warm feel. This study aims to analyze the effect of warm compress against low-back pain during the third trimester. This study conducted in Bungursari Community Health Center from May 2018 to February 2019. This study used a quasi-experiment with pre and post-test control group design. Sample taken used consecutive sampling and obtained 21 respondents of pregnant women in their third trimester. Collected data analyzed using paired t-test. The study results showed an influence on warm compressing in reducing low-back pain during pregnancy (p-value= 0.001). It can be concluded that pregnant women could be applied to warm compression when they had low-back pain.

Keyword : *low-back pain, pregnancy, warm compress*

Correspondence:
Melsa Sagita Imaniar, Midwifery Diploma Program, Health faculty of Muhammadiyah Tasikmalaya University KM 2.5 Tamansari Street tasikmalaya. Phone number: 46196 Phone/Fax : (0265) 2350982
e-mail: melsa.sagita@umtas.ac.id.

1. Introduction

During pregnancy, the mother experienced physical and emotional changes as well as social interaction in the family. These changes are due to changes in estrogen and progesterone secretion. In the third trimester, there was increasing uterine capacity, caused the body to become erect, and the maternal body's gravity decreased and caused discomfort in the lower back.[1]

Low-back pain during pregnancy occurred because of the anatomical structure, hormonal, and stress changes. During pregnancy, ligaments' elasticity increase allows the pelvic joints to a greater range of movement to prepare la.[2]

About 90% of pregnant women experience low-back pain during their pregnancy. When the pain not treated immediately, it will trigger stress, and changes in mood in pregnant women also affect the quality of sleep for pregnant women, which could lead to worsening the pain.[1]

Low-back pain management varies from pharmacological to non-pharmacological management. Non-pharmacological methods are known to be cheaper, secure, effective, and without adverse effects. Non-pharmacological treatment can be done by doing mild sports, cold and hot compress, a jar filled with warm water, changing posture when sitting, or sleeping. However, warm water compresses considered effective in reducing pain.[3]

Therapy using warm compress was an alternative method in pain management.

DOI: 10.30591/siklus.v9i2.1875.g1163

p-ISSN: 2089-6778
e-ISSN: 2549-5054

Using warm water as media helps produce a relaxing effect, reduces pain, and facilitates blood flow.[4] According to Hakiki's (2015) previous study, there was a significant influence on low-back pain using warm water compress (p-value = 0.0001).[2]

This study aimed to analyze the effect of warm compress therapy in reducing low-back pain during the third trimester of pregnancy.

2. Method

This study used a quasi-experiment method with pre and post-test. This study was conducted in Bungursari Community Health in Tasikmalaya from May 2018 to February 2019. Sample taken used consecutive sampling and obtained 21 respondents of pregnant women in their third trimester. The sample divided into two groups where the case group got intervention using warm water compression with a jar filled with warm water about 43-47 C. While the control group was given water with an average temperature of a compress for 10 minutes. Before respondents have given intervention, respondents being measured the level of low-back pain first and measured again after the intervention was done.

Collected data analyzed used univariate tests to describe the characteristics of respondents (age and gestational age). Each variable was calculated for the average value, standard deviation, median, and range, but for categorical data, the number and percentage were calculated—homogeneity on characteristics of respondents analyzed by Chi-Square. Normality data tested using Shapiro-Wilk when the result shows the distribution normal, collected data will be analyzed using paired t-test if it is not, and analyzed using Wilcoxon.

3. Results and Discussion

Table 1. Characteristic of Respondents

Characteristic	Average Water Compressio	Warm Water Compressio	p-value
	n (Control) Mean±SD	**n (Case) Mean±SD**	
Age	25.14±3.3321	25.43±3.544	>0.05
Gestational Age	38.90±0.625	38.95±0.805	>0.05

Table 1 shows that the normality test results obtained p-value on both characteristics is > 0.05, which means the data distribution is normal, so there are no differences in characteristics in the case and control groups.

Table 2 Distribution of Pain Level Before Intervention

	n	Mean	SD	Median (Min-Max)
Control	21	7.29	1.,102	7(5-9)
Kasus	21	7.33	1.238	8(4-9)

Table 2 shows that the average degree of pain before being given a regular water compress was 7.29 ± 1.102 and before giving a warm water compress which was 7.33 ± 1.238

Tabel 3. Distribution of Pain Level After Intervention

	n	Mean	SD	Median (Min-Max)
Control	21	4.95	1.244	5(3-7)
Kasus	21	3.90	0.889	4(3-6)

Table 3 shows that the average degree of pain after being given a warm water compress is 3.90 ± 0.899 and the average water compress is 4.95 ± 0.899

Tabel 4 The Difference of Pain Level Before and After Intervention

	n	mean±SD	p-value
Before	21	7.33±1.238	0.0001
After	21	3.90±0.899	

Table 4 shows the effect of giving a warm compress in reducing low-back pain in the third trimester (p-value= 0,0001). This finding is consistent with Yani's (2012) previous study. She stated that there was an effect of giving a warm

DOI: 10.30591/siklus.v9i2.1875.g1163

p-ISSN: 2089-6778
e-ISSN: 2549-5054

compress to the comforting mother (p-value= 0.04). Warm compress helped reducing pain by increase the circulation from the heat, which helped improving tissue anoxia caused by pressure.[5] Hakiki (2015), in his previous study, also found that warm compress indeed had a significant correlation with low-back pain (p-value= 0,0001).[6]

Uterus enlargement forces the ligaments, muscles, nerve fibers, and back to stretch and caused discomfort sometimes can cause back pain.[7] Warm compresses help provide comfort, reduce or relieve pain, reduce or prevent muscle spasms, and provide warmth by stimulating the skin.[3], [7]

Warm compress causes vasodilation in this process in relieving pain by relaxing muscles, increasing blood flow, sedative effect, and relieving pain. The heat will stimulate nerve fibers that close the gate so that the transmission of pain impulses to the spinal cord and the brain is inhibited.[4]

4. Conclusion

There is an effect of giving a warm compress in reducing low-back pain levels during the third trimester of pregnancy. It is expected that every pregnant woman who experiences low-back pain can apply warm compresses to reduce the discomfort.

5. Acknowledgment

The authors would like to thank the Health Faculty of Muhammadiyah Tasikmalaya University and Research and Community Service Institutions for funding this research. The authors were also grateful to the Community Health Center of Bungursari Puskesmas and the local Midwife.

6. References

[1] Alloya, A., & Wahyuni, M. K. (2016). *Beda Pengaruh Antara Senam Hamil Dengan Kompres Hangat Dan Massage Terhadap Penurunan Nyeri Punggung Bawah Pada Ibu Hamil Trimester III* (Doctoral dissertation, Universitas Muhammadiyah Surakarta)

[2] Ilzam Nujulul Hakiki. 2015. Efektivitas Terapi Air Hangat Terhadap Nyeri Tulang Belakang pada Ibu Hamil Di Wilayah Kerja Puskesmas Pisangan. Fakultas Kedokteran dan Ilmu Kesehatan. Jakarta: Universitas Islam Nusantara.

[3] Indah. Syafitri Elvira. 2015. *Penatalaksanaan Nyeri Punggung (Low Back Pain) pada Ibu* Hamil. Proceedng Book Workshop Nasional Pengembangan Pendidikan dan Pelayanan Kebidanan Indonesia. : UNPAD

[4] Rubinstein SM, Middelkoop van M, Kuijpers T, Ostelo R, Verhagen AP, Noer de MR, dkk. A systematic review on the effectiveness of complementary and alternative medicine for chronic non spesific low back pain. Eur Spin J. 2010.

[5] Selvia D. Richard 2014. Efektivitas Kompres Hangat dan Gosok Punggung (*backrub*) Terhadap Nyeri Punggung Ibu Hamil Trimester III di Puskesmas Pesantren I Kota Kediri. Yogyakarta. Universitas Gajah Mada.

[6] Manurung S. 2011. Pengaruh Teknik pemberian kompres hangat terhadap perubahan skala nyeri persalinan pada klien primigravida. http://www. journal.unipdu.ac.id

[7] Sadr S, Pourkiani Allah abad N, stuber KJ. The treatment experiences of patiens with low back pain during pregnancy and their chiropractors: a qualititative study, Bio Med Central. 2012.

DOI: 10.30591/siklus.v9i2.1875.g1163