

Article

The Effect of Warm Compresses on Dysmenorrhea In Adolescents in The Selomartani District Kalasan Sleman

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A B S T R A C T

Many women experience menstrual problems, including pain during menstruation, known as dysmenorrhea. Dysmenorrhea pain is the most common complaint and is experienced by many women. Many teenagers experience dysmenorrhea in the first three years after menarche. Young adult women aged 17-24 years are the ones who most often report painful menstruation. This study aims to determine the effect of giving warm water compresses on dysmenorrhea in teenagers in Selomartani Village, Kalasan, Sleman. This research was carried out as a quasi-experiment so that data was taken before treatment and after treatment. Data was collected using a questionnaire, then analyzed with one group pre and post test. The research results showed that there was an effect of giving warm water compresses on dysmenorrhea in teenagers in Selomartani Village, Kalasan, Sleman, where the p value was <0.05.

I. INTRODUCTION

Menstruation is the shedding of the endometrial wall accompanied by bleeding that occurs repeatedly every month except during pregnancy (Rosyida DAC, 2012). The menstrual cycle is divided into four phases characterized by changes in the uterine endometrium, namely the menstrual phase, proliferation phase, ovulation phase, post-ovulation phase (Proverawati A, Misaroh S, 2012). During the post-ovulatory phase, prostaglandins are produced. Systemic responses to prostaglandins include back pain, weakness, sweating, gastrointestinal symptoms (anorexia, nausea, vomiting and diarrhea) and central nervous system symptoms include: dizziness, syncope, headache and poor concentration (Irianto K, 2015). A woman's age, physical, emotional status, and environment also influence the regularity of the menstrual cycle (Lowdermilk, D, 2013).

Many women experience menstrual problems, including pain during menstruation, known as dysmenorrhea. Dysmenorrhea consists of a complex of symptoms in the form of lower abdominal cramps that radiate to the back or legs and is usually accompanied by gastro intestinal symptoms and neurological symptoms such as general weakness (Manuaba, I. A. C, 2014). Signs and symptoms that may be present in dysmenorrhea include sharp pain, cramping in the lower abdomen which usually spreads to the back, thighs, groin and vulva (Kowalak J, 2011).

Handling dysmenorrhea is very important, especially in adolescence, because if it is not treated it will affect the activities of the teenager himself (Ayuningtyas IF, 2015). Some ways to reduce the pain you experience are getting enough rest, regular exercise, massaging the waist area, warm compresses on the stomach area and adjusting your position (Ayuningtyas IF, 2015). A warm compress is a method of providing a feeling of warmth to the client by using a liquid or tool that causes warmth to the part of the body that needs it. The warm effect of the compress can cause vaso dilation in the blood vessels which in turn will increase blood flow to the tissues. In this way, the distribution of acids and food to the cells is increased and the elimination of these substances is improved, which can reduce primary menstrual pain caused by insufficient blood supply to the endometrium (Tamsuri A, 2012).

Research on the behavior of tenth grade teenage girls regarding the treatment of primary dysmenorrhea at SMAN 1 Bantul showed that of the 20 respondents who experienced dysmenorrhea, they said that during menstruation they experienced symptoms of nausea, aches, lower abdominal pain, back pain, the body felt weak, and were reluctant to do activities. Several statements were asked to several female students regarding efforts to deal with pain during menstruation, namely 40% of students by resting/lying down, 45% of students applying eucalyptus oil, 35% of students compressing warm water on the painful part, 45% of students taking anti-pain medication (for example, kiranti, etc.), 55% of students do relaxation/deep breathing techniques, 30% of students do check-ups with health workers, 50% of students consume traditional medicine (herbal medicine, turmeric, etc.), and 35% of students do light exercise (Rahmawati, 2016).

Based on the background above, the author is interested in conducting research on the Effect of Giving Warm Water Compresses on Dysmenorrhea in Adolescents in Selomartani District, Kalasan, Sleman.

II. METHODS

The type of research used was quasy-experiment with a pretest-posttest design in the group that received warm compresses (Alpansyah, 2020). The target population is all young women who have menstruated. The target population is all young women aged 15-20 years who experience primary dysmenorrhea in Selomartani Village, Kalasan, Sleman. The sample was part of the study population that met the inclusion and exclusion criteria for the warm water compress treatment group, consisting of 20 respondents. Pain measurement uses the Numeric Rating Scale (NRS) (Septima R, 2023). This is used as a unidimensional measurement of pain intensity in adult

individuals, including individuals with chronic pain. The way to use this method is by the respondent selecting a number between 0 and 10 which is shown on the line for describes the intensity of pain felt. Data analysis begins with a data normality test to determine the characteristics of the data, then the data is presented in tabular form using the Shapiro-Wilk Test Independent T Test (Septima), while to find out the difference, the Mann-Whitney Test was carried out.

III. RESULT

3.1 Dysminorrhea Pain Scale Examination Results (*pre test*)

Table 1. Results of the Dysminorrhea Pain Scale examination in teenagers in Selomartani District (*pre-test*)

Pain Scale	Frequency Dysmenoroea	%
Not painful	0	0
Mild pain	3	21.43
Moderate pain	4	28.57
Severe pain	7	50
Total	14	100

Based on table 1, data was obtained that teenagers who experienced dysmenorrhea with the highest pain scale experienced severe pain of 7 (50%) before being treated with warm compresses.

3.2 Results of Dysminorrhea Pain Scale Examination in teenagers in Selomartani District (*post test*)

Tabel 2. Results of the Dysminorrhea Pain Scale examination in teenagers in Selomartani District (*post test*)

Pain scale	Frequency	%
Not painful	4	28.57
Mild pain	6	42.86
Moderate pain	3	21.43
Severe pain	1	7.14
Total	14	100

Based on table 2, data shows that 6 (42.86%) teenagers who experienced dysmenorrhea on the pain scale experienced mild pain after being treated with a warm compress. There were 4 (28.57%) teenagers who no longer experienced dysmenorrhea pain.

3.3 Data Normality

Data normality test using the Kolmogorov-Smirnov and Shapiro-Wilk tests on teenagers in Selomartani District in 2022

Tabel 3. Data Normality

Group	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Pain compress group Pre Pain Scale	.175	14	.200*	.920	14	.470
Pain compress group Post Pain Scale	.166	14	.200*	.909	14	.391

Based on table 3, the data results above obtained a pre-test p value for the warm compress group of 0.470. Meanwhile, the post-test value of the warm compress group was 0.391, thus explaining that the results of the research carried out could be said to be normally distributed or meaning that the data received H_0 because the p value was more than 0.05 with the Shapiro-Wilk test.

3.4 Analysis of the effect of warm compresses on dysmenorrhea in teenagers in Selomartani District, Kalasan Sleman

Analysis of the effect of warm compresses and dysmenorrhea exercises on dysmenorrhea among teenagers in the Selomartani Kalasan sub-district, Sleman can be seen in table 4

Table 4 Analysis of the effect of warm compresses on dysmenorrhea in teenagers in Selomartani District, Kalasan Sleman in 2022

Paired Differences		t	df	Sig.	NGai				n
Mean	Std. Deviation					Std. Error	95% Confidence Interval of the Difference	(2-tailed)	
Pre Test – post test warm compresses		4.286	3.817	1.443	.755	7.816	2.970	6	.025

Based on table 4.4 above, it can be seen that the results of the paired t-test on the effect of giving warm compresses obtained a value of $p = 0.025$, so it can be concluded that there is an effect of warm compresses on dysmenorrhea in teenagers in Selomartani Kalasan Sleman Village

IV. DISCUSSION

Based on table 4.4, it can be seen that the results of the paired t-test Testing the effect of warm compresses on dysmenorrhea in teenagers in the Selomartani Kalasan Sleman sub-district, the value was $p = 0.025$, so it can be concluded that there is an effect of warm compresses on dysmenorrhea in teenagers in the Selomartani Kalasan Sleman sub-district.

Dysmenorrhea causes pain in the lower abdomen, which can radiate to the lower back and legs. Pain is felt as cramps that come and go or as a dull ache that is persistent. Usually, the pain begins to appear just before or during menstruation, reaches its peak within 24 hours and after 2 days will disappear. Dysmenorrhea is also often accompanied by headaches, nausea, constipation or diarrhea and frequent urination, sometimes leading to vomiting (Nugroho T, 2014).

Primary dysmenorrhea is a normal process experienced during menstruation. Primary menstrual cramps are caused by very intense uterine muscle contractions, which are intended to

shed the uterine lining that is no longer needed. Primary dysmenorrhea is caused by natural chemicals produced by the cells lining the uterine wall called prostaglandins. Prostaglandins will stimulate the smooth muscles of the uterine wall to contract. The higher the prostaglandin levels, the stronger the contractions, so the pain felt is also stronger. Usually, on the first day of menstruation, prostaglandin levels are very high. On the second and subsequent days, the uterine lining will begin to shed, and prostaglandin levels will decrease. Menstrual aches and pains will decrease as prostaglandin levels decrease (Nugroho T, 2014).

The classification of pain based on severity is 4, namely 0 is described as no pain, 1-3 is described as mild pain, namely there is pain (starting to be felt but can still be endured), 4-6 is described as moderate pain, that is, there is pain, it feels annoying. A scale of 7-10 is described

as severe pain, that is, there is pain, it feels annoying or unbearable so that you have to grimace, scream or scream (Manuaba, 2014).

Warm compresses provide a warm feeling to meet comfort needs, reduce or relieve pain, reduce or prevent muscle spasms and provide a warm feeling in certain areas. Warm compresses can be used to reduce or relieve stimulation of nerve endings or block the direction of pain impulses to the brain (Tamsuri, 2012).

The results of this study are in line with research that has been conducted entitled the effect of giving warm compresses and endorphine massage on the incidence of adolescent dysmenorrhea¹⁴. The results of the study showed that before the warm compress was applied, the majority of pain scales were moderate and the results after the warm compress were applied, the majority of pain scales were mild. This research shows that there is a significant difference in the pain scale before and after giving a warm compress (p value 0.007).

This study is also in line with the study entitled different of influence between abdominal exercise and warm compress on the change of dysmenorrhea¹⁵, the average intensity of dysmenorrhea pain before warm water compress was 6.90 and after warm water compress was 4.50. The results of the Man Whitney test obtained a p-value of 0.002 ($\alpha = 0.05$) so H_0 was rejected and H_a was accepted. It can be concluded that warm water compresses have an effect on reducing the level of primary dysmenorrhea pain.

Basically, warm compresses provide a warm feeling to meet the need for comfort, reduce or relieve pain, reduce or prevent muscle spasms and provide a warm feeling in certain areas. Warm compresses can be used to reduce or relieve stimulation at the nerve endings or block the direction of pain impulses to the brain (Tamsuri, 2012).

V. CONCLUSION

Based on the results of the study on the effect of giving warm water compresses and dysmenorrhea exercises on dysmenorrhea in adolescents in Selomartani Village, Kalasan, Sleman, it can be concluded that: the level of dysmenorrhea pain before giving warm compresses with a severe pain scale of 57.14%, the level of dysmenorrhea pain after giving warm compresses with a mild pain scale of 42.86%, there is an effect of giving warm water compresses on dysmenorrhea in adolescents in Selomartani Village, Kalasan, Sleman.

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BIOGRAPHY

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