The Effect Of Effleurage Massage and Slow Stroke Back Massage Reduce Menstrual Pain Intensity

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ABSTRACT

Background: Menstrual pain is the pain arising before or along with menstruation, lasting for a few hours and can last up to several days. Effleurage massage is doing by rubbing gently, not giving strong pressure and pressing fingertip in the skin surface slowly. Slow stroke back massage is a gentle, slow, any rhythmic massage in the back by covering 5 cm area on both sides of the spine bulge from head to the sacrum area. This study aims to determine the difference of effectiveness effleurage massage and slow stroke back massage to reduce menstrual pain intensity in the students of University of Muhammadiyah Mataram in 2020.

Methods: The design of this study was quasy experiments with two group pretest-posttest design. The population was the entire students Permata Husada Midwifery Academy, there were two groups, namely efflurage and slow stroke back massage group with 16 students each by using purposive sampling technique.

Results: The results of the research showed the mean of pain intensity for the efflurage group is 18,94 while for the backrub massage 14,06 even there is significant differences according to pvalue. P value is > 0,05.

Keyword: Pain Menstrual, Effleurage Massage, Slow Stroke Back Massage

Background. Menstruation is the discharge of the decidual (superficial) layer of the endometrium accompanied by bleeding (Coad and Dunstall, 2016). During menstruation many women experience physical disturbances and discomfort starting before and immediately after menstrual flow and continuing for 8 hours to 72 hours. This discomfort can be in the form of pain in the stomach and back (Atikah Proverawati, 2013)

According to the WHO (2019), the average incidence is more than 50% of women in every country experience menstrual pain. In the United States, the percentage is 60% women of reproductive age. About 10-15% of them are forced to lose their job, school and family life opportunities. Meanwhile, in Indonesia, the menstrual pain rate is estimated to reach 55% in reproductive women. Menstrual pain felt is caused by uterine contractions, causing the uterus to be compressed. This form of stimulus stimulates the release of chemicals, namely histamine,

bradykinin and potassium. The influence of these substances active nociceptors transmit pain impulses. Pain impulses are transmitted upward to the gelatinous substance in the dorsal horn of the spinal cord at 10-12 thoracic to lumbar 1. These impulses are transmitted by peripheral nerve fibers, namely A-Delta fibers and C fibers to the thalamus. The thalamus as the post-central gyrus projects pain to the cerebral cortex which will then be perceived. Effleurage is a movement by using the entire surface of the palms attached to the body parts that are rubbed. The shape of the palms and fingers always adjusts to the part of the body being rubbed (Trisnowiyanto and Bambang, 2017).

Effleurage is a massage technique in the form of soft, slow, long or continuous strokes for 3 to 10 minutes (Mayunani and anik, 2015). Slow stroke back massage is an action of back massage with slow and rhythmic pressure with circular movements at a speed of 60 strokes per minute for 3-5 minutes. By

placing both palms, cover an area that is 5 cm wide on both sides of the spine from the tip of the head to the sacrum area (Karvianti, 2012)

The results of a preliminary study conducted by researchers by conducting interviews with 15 female students at the Muhammadiyah University of Mataram, 75% experienced menstrual pain, while 25% did not experience menstrual pain. Treatment for pain includes taking medication and rest. From this description, the author is interested in conducting research on "The Differences in the Effectiveness of Effleurage Massage and Slow Stroke Back Massage on Menstrual Pain Intensity".

Methods. The design in this research is quasi-experimental with a two group pretest-posttest design approach. The sampling technique is probability sampling (Sugiyono, 2016). In the Effleurage massage group there were 16 people and in the slow stroke back massage group were 16 people for 5 minutes treatment and pain intensity was measured again with a pain scale of 0-10. The study was conducted at the University of Muhammadiyah Mataram in October – November 2020. The sample of this study was 36 students at UMMAT. The data was collected by using the observation method before and after the massge effleurage was carried out. Data in this study used a marked rank test from the Wilcoxon test (Nursalam, 2016, 2013)

Result

Characteristics of Respondents

Characteristic	Effrulage Massagel (n= 16)		Back Massage (n=16)	
	F	%	F	%
Age				
17-20th	16	50	8	27,6
21-25th	16	50	21	72,4

Frequency distribution based on pain intensity before Effleurage massage and before slow stroke back massage

Variable	N	Mean	Median	MIn	Max
Effleurage	16	3.94	4.00	1	6
Slow Stroke Back Massage	16	3.81	4.00	1	6

Frequency distribution based on pain intensity after Effleurage massage and after slow stroke back massage

Variable	N	Mean	Median	MIn	Max
Effleurage	16	2.25	2.00	0	5
Slow Stroke Back Massage	16	1.50	1.00	0	4

Differences in pain intensity before and after Effleurage massage

Variable	N	Mean Rank	Z	P-value
Pre EM Pain- Post EM Pain	16	8.50	-3.596	0.000

Differences in the intensity of pain before and after slow stroke back massage

Variable	N	Mean Rank	Z	P-value
Pre SBBM Pain - Post SBBM pain	16	8.50	-3.562	0.000

Differences in the effectiveness of Effleurage massage and slow stroke back massage on the intensity of menstrual pain

Variable	Group	N	Mean Rank	Z	P-value
Post Pain	Effleurage	16	18.94	-1.520	0.129
	Slow Stroke Back Massage	16	14.06		

Discussion.

Differences in pain intensity before and after Effleurage massage

In the results of the study the average value of the difference between the intensity of pain before and after massage effleurage with a mean rank of 8.50 and a p-value of 0.000. From these results indicate that there is significant reduction in pain after intervention on the respondent.

Before being given Effleurage massage menstrual pain is natural and normal. After being given an Effleurage massage, menstrual pain decreased given stimulation tactile fibers in the skin so that pain signals could be inhibited (Mukhoirotin and Zulaini, 2018)

Menstrual pain is caused by prostaglandins. Prostaglandins that play a role here are prostaglandin E2 (PGE2) and F2α (PGF2α). Prostaglandin release is induced by endometrial lysis and cell membrane damage due to lysozyme release. Prostaglandins cause increased activity of the uterus and nerve endings of pain stimuli. The combination of increased prostaglandin levels and increased myometrial sensitivity results in intrauterine pressure of up to 400 mm Hg and causes severe myometrial contractions. Furthermore, myometrial contractions caused by prostaglandins will reduce blood flow, resulting in ischemia of myometrial cells resulting in spasmodic pain. If prostaglandins are released in excessive amounts into the bloodstream, in addition to menstrual pain, diarrhea, nausea, and vomiting may occur (Coad and Dunstall, 2016)

The results of this study are also supported by a statement from (Kabupaten *et al.*, 2020) that the pain caused can affect the psychosocial patterns experienced by young women so that it will be difficult to experience daily activities.

Differences in the intensity of pain before and after slow stroke back massage

The difference in pain intensity before and after slow stroke back massage with a mean rank of 8.50 with a p-value of 0.000, then p-value < (0.05). Shows that there is a significant difference in the intensity of menstrual pain before and after slow stroke back massage.

Gate control theory Melzack and Wall (1965) in (Manurung and Suryani, 2014) says that pain impulses are regulated or inhibited by defense mechanisms throughout the central nervous system. This theory also states that pain impulses are transmitted when a barrier is opened and pain impulses are inhibited when a barrier is closed. Efforts to close the defense is the basis of the theory of pain relief. Small diameter nerves transmit pain impulses to the hypothalamus and then transmitted to the cerebral cortex so that pain perception will occur, while large diameter nerves try to inhibit the transmission of pain impulses from the spinal cord to the brain. This mechanism occurs in the cells of the substancia gelatinosa in the dorsal horn of the spinal cord (Trisnowiyanto and Bambang, 2017).

Differences in the effectiveness of Effleurage massage and slow stroke back massage on the intensity of menstrual pain

To find out the difference in the intensity of menstrual pain before and after being given slow stroke back massage to, 32 respondents, 16 respondents who were given the Effleurage technique, the mean rank of pain reduction was 18.94, while the other 16 respondents who were given slow stroke back massage had a mean rank. decreased pain by 14.06.

Based on the test, a p value of 0.011 was obtained. Because both p value 0.129 < (0.05), it can be concluded that there is no significant difference in the decrease in the intensity of menstrual pain between those who received efflurage massage and slow stroke back massage.

Conclusion and Suggestions. Based on the results of data analysis and discussion above, it can be concluded that The difference in pain intensity before and after Effleurage massage with a mean rank of 8.50 with a p-value of 0.000, then p-value < (0.05). There is a significant difference in the intensity of menstrual pain before and after the effleurage massage.The difference in pain intensity before and after slow stroke back massage with a mean rank of 8.50 with a p-value of 0.000, then p-value < (0.05). There is a significant difference in the intensity of menstrual pain before and after slow stroke back massage.

Suggestions for Young Women and Society Teenagers and the public take advantage of Effleurage massage and slow stroke back massage because the massage technique is easy, safe, doesn't need a lot of

tools, doesn't cost money, and doesn't have side effects to reduce menstrual pain by reducing menstrual cramps. For Midwife; Effleurage massage and slow stroke back massage can be chooses as an alternative non pharmacologival interventions to help clients with menstrual pain. And for Further Researchers can conduct further research, especially those related to the provision of Effleurage massage and slow stroke back massage

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