

Massage Effleurage to Decrease the Intensity of Primary Dysmenorrhea for State 1 SMP Students in Bitung Manado Year 2021

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ABSTRACT

Background: Dysmenorrhea is menstrual pain felt in the lower abdomen that occurs before or during menstruation which is a major gynecological problem, which is often complained by women. In adolescents, menstrual pain (dysmenorrhea) is felt. Some of them during menstruation often feel uncomfortable and even very often interfere with daily activities.

Destination: This study aims to determine the effectiveness of effleurage massage using rose aromatherapy on reducing the intensity of primary dysmenorrhea in adolescent girls at SMP Negeri 1 Bitung Manado in 2021.

Method: This type of research is a Quasi-Experimental Design with a Pre-Test and Post-Test One Group Design research design. The population in this study were 138 young women. The sampling technique was purposive sampling with a total sample of 30 respondents. Collecting data using questionnaires and checklist sheets for menstrual pain. The statistical test used the Wilcoxon test with a significance level of (0.05).

Results: The study showed that before being given the effleurage massage the average value was 4.83 while after being given the effleurage massage the average value was 1.53 and p value 0.00. It is recommended for adolescents to do effleurage massage when experiencing primary dysmenorrhea.

Keywords: Primary Dysmenorrhea, Massage Effleurage, Rose Aromatherapy, Youth

BACKGROUND

Adolescence is a transition period where there is a transition from childhood to adulthood (Dewi et al., 2022). According to *World Health Organization* (WHO) 2015 in Dewi et al., 2022, Adolescents are residents in the age range of 10 to 19 years. At this time, there is also rapid progress in the maturity of the function of the sexual organs or in other words, experiencing puberty and is marked by the first menstruation in adolescent girls. Menstruation means periodic and cyclic bleeding from the uterus accompanied by the shedding of the endometrial lining (Handayani et al., 2021)

One of the most common disorders during menstruation is dysmenorrhea. Dysmenorrhea is pain that is felt in the lower abdomen and occurs before, during or after menstruation. The symptoms of dysmenorrhea are cramps and lower abdominal pain, lower back pain, nausea, diarrhea, vomiting, fatigue, fainting, weakness and headache. (Calis, 2014)

The incidence of primary type dysmenorrhea in Indonesia is around 54.89% while the rest sufferers with

secondary dysmenorrhea (Fatma & Asna, 2020). Dysmenorrhea occurs in adolescents with a prevalence ranging from 43% to 93%, where about 74-80% of adolescents experience mild dysmenorrhea, while the incidence of endometriosis in adolescents with pelvic pain is estimated at 25-38%, while in adolescents who do not respond positively to treatment for menstrual pain, endometriosis was found in 67% of cases at laparoscopy (Hestiantoro et al, 2012).

Although dysmenorrhea is experienced by many menstruating women, many of them often ignore the pain without taking proper treatment, this condition can endanger their own health if left alone because the pain can be a symptom of endometritis or secondary dysmenorrhea. other (Gumilar, 2014). Pain that is felt during menstruation often causes discomfort in women so that it can cause the woman to be unable to carry out daily activities. One method that can be used to reduce dysmenorrhea pain is massage effleurage using rose aromatherapy oil (Zuraida & Aslim, 2020)

Massage effleurage is one of the non-pharmacological methods used to reduce pain. With effleurage massage, tissue hypoxia will be reduced so that oxygen levels in the tissue increase which causes pain to decrease. In addition, effleurage massage can increase the release of endorphins so that the pain threshold decreases. One of the effective massage techniques in reducing dysmenorrhea is aromatherapy massage (Apay, 2012).

Preliminary study conducted in SMP Negeri 1 Bitung Manado in November 2021 there were 215 grade 1 students and it was found that 121 students (57%) had dysmenorrhea with different levels of pain. Respondents with dysmenorrhoea who felt mild pain were 64 students (52.9%), moderate pain were 49 students (40.5%) and severe pain were 8 students (6.65%). They said the pain could interfere with learning activities and not be enthusiastic when participating in learning at school, even the students asked

for permission to go home to rest in the dorm and could not participate in learning activities at school.

METHOD

The method used in this research is using Quasi-Experimental Design with Pre-Test and Post-Test One Group Design research design (Sugiyono, 2018). The type of statistical test used is Wilcoxon. The sample in this study was selected using a purposive sampling technique (Lestari et al., 2021) so that 30 students were selected in SMP Negeri 1 Bitung Manado who had dysmenorrhea and met the inclusion criteria. Inclusion criteria include: (1) Students who have experienced menstruation. (2) Willing to be a respondent. (3) Do not take painkillers or herbal remedies. (4) Students who are experiencing dysmenorrhea during menstruation. The location of the research was carried out in SMP Negeri 1 Bitung Manado 2021 year.

RESULTS

Table 1. Frequency Distribution of Respondents Characteristics At SMP Negeri 1 Bitung Manado year 2021

Characteristics	Amount	Percentage(%)
Age		
14-15 Years	10	33.0
16-17 Years	20	67.0
Weight (Kg)		
<40	2	7.0
40-50	21	70.0
>50	7	23.0
Height (Cm)		
145-155	19	64.0
156-170	11	36.0

Based on table 1 above, it can be seen that the age group of respondents is 14-15 years, which is 33% and the age group of respondents is 16-17 years, which is 67%. The weight of the most respondents was respondents with a weight between 40-40 kg, which was 70.0%. While the respondent's body weight at least is <40 kg, which is 7.0%. Then the height of the respondent is between 145-155 cm, which is 64.0% and the respondent with a height of 156-170 cm is 36.0%.

Table 2. Distribution of Pain Intensity Frequency Before and After Massage Effleurage Intervention on Respondents At SMP Negeri 1 Bitung Manado year 2021

Pain Intensity	Massage Effleurage						P Value
	Before			After			
	n	%	mean	n	%	mean	
Mild Pain (1-3)	5	17.0	4.83	13	43.0	1.53	0.00
Moderate Pain (4-6)	17	57.0		13	43.0		
Severe Pain (7-10)	8	26.0		4	14.0		
Total	30	100.0	30	100.0			

Based on Table 2 above, it can be seen that the response that experienced mild pain (1–3) before the effleurage massage was done as many as 5 respondents (17.0%) while after it was done it increased to 13 respondents (43.0%). The moderate pain scale (4–6) before the effleurage massage was carried out by 17 respondents (57.0%), while after it was done it decreased to 13 respondents (43.0%). The weight scale (7–10) before the effleurage massage was done was 8 (26.0%) while after it was done it decreased to 4 respondents (14%). The average pain scale before the effleurage massage was 4.83 and after the effleurage massage the average pain scale was 1.53. The p value of the test carried out is $0.00 < 0.05$.

DISCUSSION

Dysmenorrhea is menstrual pain characterized by brief pain before or during menstruation which is a major gynecological problem, which is often complained by women.(Handayani et al., 2022). According to(Dewi et al., 2022) Dysmenorrhea is pain during menstruation, usually with cramping and centered in the lower abdomen. Complaints of menstrual pain can occur ranging from mild to severe. Dysmenorrhea begins when a girl reaches their ovulatory cycle, usually 3 years after menarche.(Marzouk, 2011).Dysmenorrhea that occurs in adolescents has an impact on their daily lives, for example limitations in physical and social activities and decreased academic achievement.(Fatma & Asna, 2020) One of the measures that can be used to reduce the intensity of dysmenorrhea pain felt by respondents is massage effleurage using aromatherapy oil, be it sweet almond oil or rose aromatherapy oil. Through

effleurage massage using aromatherapy oil, hypoxia that occurs in the tissue will be reduced because oxygen levels in the tissue increase so that the pain felt is reduced. In addition, it can also increase blood circulation and reduce stress and relieve stiff muscles. After being given a massage there will be a release of endorphins which can increase the pain threshold that is felt so that the pain will be reduced(Hur et al, 2014). Massage using aromatherapy is useful for relieving fatigue in the body, improving blood circulation and stimulating the body to remove toxins, as well as improving mental health. The massage by giving rose aromatherapy oil on the first day is applied to the aching stomach, done on the first day when you feel pain. After that the massage is carried out for 10 minutes with the effleurage method, which is to massage in a sleeping or half-sitting position, then place both palms on the stomach and simultaneously move in a circle towards the center to the symphysis or you can also use one palm with a circular motion or one direction. (Marni, 2014). The massage in this study was carried out 2 times, after 6 hours of the first massage, the second massage was repeated in the same way. This is in line with the results of research by Purwati andSaifullah, (2015) ie with a sample size of 40. Aromatherapy massage using 2 drops of lavender essential oil mixed with 1 ml of olive oil. 2 x on the first day with a 6 hour difference from the first massage. The results showed that there was a significant effect of giving lavender aromatherapy on the level of desminorrhea pain. In this study, the effect felt by respondents after giving effleurage massage using rose aromatherapy oil stated that they felt more comfortable, reduced/stopped cramps in the

lower abdomen, could concentrate on studying and doing other activities. Changes in the level of pain experienced by respondents showed a decrease in the level of menstrual pain.

This is in line with the results of research by Purwati and Saifullah, (2015). Aromatherapy massage using 2 drops of lavender essential oil mixed with 1 ml of olive oil. 2 times on the first day with a 6 hour difference from the first massage. The results showed that there was a significant effect of giving lavender aromatherapy on the level of dysmenorrhea pain. In addition, research by Marni Wahyuningsih (2014) has proven to be effective in reducing pain levels. Likewise, the results of research conducted by Marzouk, (2011) which showed a significant decrease in the intensity of dysmenorrhea pain in the group given abdominal massage with essential oils.

Thus, researchers assume that effleurage massage using rose aromatherapy oil during menstruation can reduce menstrual pain (dysmenorrhea) that is felt because the effleurage massage technique can increase blood circulation, apply pressure, warm abdominal muscles and increase physical and mental relaxation. While aromatherapy roses have one substance, namely linalool which is useful for stabilizing the nervous system so that it can cause a calming effect for anyone who inhales it and roses are also analgesic and antispasmodic. If rose aromatherapy is used by means of massage (massage effleurage), the aromatherapy oil is not only inhaled through the sense of smell but can also be absorbed through the skin and then enter the tissue that requires treatment so that the pain felt will be reduced.

CONCLUSION

The results showed that There is a difference before and after the effleurage massage intervention in the intensity of primary dysmenorrhea with p value of 0.00. Before being given the effleurage massage the average value was 4.83 while after being

given the effleurage massage the average value was 1.53.

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REFERENCES

1. Al, H. E. (2014). Aromatherapy For Stress Reduction In Healthy Adults: A Systematic Review And Meta-Analysis Of Randomized Clinical Trials. Dari <https://www.ncbi.nlm.nih.gov/pubmed/25234160>. Di akses Pada Tanggal 24 Desember 2018.
2. Apay. (2012). Akupresur Dengan Dismenorea. Di Akses Pada Tanggal 23 Desember 2018. Akupresur Dengan Dismenorea. Di Akses Pada Tanggal 23 Desember 2018.
3. Calis. (2014). Dysmenorrhea. Di akses Pada Tanggal 23 Desember 2018. Calis. 2014. Dysmenorrhea. Di Akses Pada Tanggal 23 Desember 2018. Dari <http://emedicine.medscape.com/article/253812-overview#a3>.
4. Dewi, R. K., Megasari, A. L., Nurvita, S., Kusumawati, I., Suyati, Syamsuriyati, Hutomo, C. S., Riana, E. N., Argaheni, N. B., Putri, N. R., Handayani, R., Dewi, W. P., Yuliani, M., Fitriyya, M., Kumala, T. F., Sinaga, R., Kustiani, A., Rahmiati, B. F., Sriyanti, H., ... Sembiring, A. br. (2022). Pengantar Kesehatan Reproduksi dan Keluarga Berencana (M. J. F. Sirait (ed.); 1st ed.). Yayasan Kita Menulis.
5. Dkk, H. (2012). Masalah Gangguan Haid Dan Infertilitas. In H. A, Masalah Gangguan Haid Dan Infertilitas (P. FKUI). Jakarta. Masalah Gangguan Haid Dan Infertilitas. In H. A, Masalah Gangguan Haid Dan Infertilitas (P. FKUI). Jakarta.
6. Fatma, J., & Asna, A. (2020). Pengaruh Massage Effleurage Abdomen Terhadap

- Penurunan Dismenore Primer Pada Remaja Putri. *Keperawatan*, 01(01), 1–6.
7. Gumilar, R. . (2014). Pengaruh Pendidikan Kesehatan Terhadap Perubahan Tingkat Pengetahuan Remaja Putri Tentang Penanganan Dismenore Di SMP N 2 Kartasura. *Perubahan Tingkat Pengetahuan Remaja Putri Tentang Penanganan Dismenore Di SMP N 2 Kartasura*.
 8. Handayani, R., Asmi, N., Awaru, A. F. T., & Rahmadani, R. A. (2022). The Effect of Giving Papaya (Carica Papaya) on the Smooth Menstruation of High School State 3 Makassar Students: A Case Study. 7(September), 304–307.
 9. Handayani, R., Hutomo, C. S., Kartikasari, M. N. D., Sinaga, L. R. V., Suyati, Saragih, H. S., Wijayanti, I., Aji, Y. G. T., Pujiani, Tasnim, Argaheni, N. B., Zulfatunnisa, N., & Humaira, W. (2021). *Dasar Kesehatan Reproduksi* (Ronald Watrianthos (ed.); 1st ed., Issue 69, pp. 1–186). Yayasan Kita Menulis.
 10. Lestari, W., Karo, M. B., Sitompul, E. S., Rufaidah, A., Dahlan, A., Gustirini, R., Hastuti, P., Sainafat, A., Rahayuningsih, F. B., Maula, S. N., Pujiastuti, N., Nainggolan, D. R., Ujung, R. M., Rahyani, N. K. Y., & Winarti, E. (2021). *Metodologi Penelitian Kebidanan*.
 11. Marzouk. (2011). Effect Of Dimethoate, Dicofol And Voltaren On Oxidant/Antioxidant Status In Male Rats: Role Of Selenium. *J. Agric. Environ.*
 12. Saifullah. (2015). Saifullah. 2015. <http://repository.ummy.ac.id/bitstream/handle/123456789/2481/> . Di akses Tanggal 13 November 2018. [Http:// Repository.Umy.Ac.Id/Bitstream/Handle/123456789/2481/](http://Repository.Umy.Ac.Id/Bitstream/Handle/123456789/2481/) . Di Akses Tanggal 13 November 2018.
 13. Sugiyono. (2018). *Metode Penelitian Kombinasi (Mixed Methods)* (Sutopo (ed.); 10th ed.). Alfabeta.
 14. Zuraida, & Aslim, M. (2020). Pengaruh Massage Effleurage Terhadap Penurunan Nyeri Dismenore Primer Pada Remaja Putri Di SMAN 1 Sutura Kabupaten. *Menara Ilmu*, XIV(01), 144–149.

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