

THE EFFECT OF GIVING LAVENDER AROMATHERAPY ON DYMNORRHEA IN WOMEN STUDENTS

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ABSTRAK PENGARUH PEMBERIAN AROMATERAPI LAVENDER TERHADAP DISMENOREAL PADA REMAJA PUTRI

Angka kejadian nyeri haid di seluruh dunia masih sangat besar, persentase kejadian nyeri haid di dunia rata-rata lebih dari 50% atau berkisar 15,8-89,5% wanita di setiap negara mengalami nyeri haid. Prevalensi nyeri haid di Amerika diperkirakan sebesar 45-90%, kemudian di India sebesar 75% dan di Mesir angka prevalensinya diperkirakan sebesar 75%. MA Muhammadiyah Sukarame dengan melihat data 1 tahun terakhir pada tahun 2021 sebanyak 215 responden, dengan rata-rata nyeri bulanan sebanyak 42 remaja putri. Tujuan penelitian ini adalah untuk mengetahui pengaruh pemberian aromaterapi lavender terhadap dismenore pada siswi MA Muhammadiyah Sukarame Kota Bandar Lampung Tahun 2022.

Jenis penelitian ini adalah kuantitatif. Dengan desain penelitian quasi eksperimen dengan desain nonequivalent control group design. subjeknya adalah siswa MA Muhammadiyah, teknik pengambilan sampel menggunakan purposive sampling. Penelitian dilakukan pada tanggal 28 April sampai dengan 30 Juli 2022. Variabel independennya adalah aromaterapi lavender dan dismenore dependen. Analisis data menggunakan univariat dan bivariat menggunakan uji Man Whitney.

Skala nyeri sebelum dilakukan teknik aromaterapi lavender dengan rata-rata sebesar 7,67 yang berarti sebagian remaja putri mengalami nyeri dismenore dengan kategori berat. Kelompok kontrol dengan rata-rata 8,60 yang berarti sebagian besar remaja putri mengalami nyeri dismenore dengan kategori berat. Skala nyeri setelah dilakukan teknik aromaterapi lavender dengan rata-rata 1,62 yang berarti sebagian remaja putri mengalami nyeri dismenore dalam kategori ringan. Posttest kontrol dengan rata-rata 3,93 yang berarti sebagian remaja putri mengalami nyeri dismenore dengan kategori ringan. Hasil uji statistik Man Whitney diperoleh p-value sebesar 0,000 (<0,05) yang berarti terdapat pengaruh pemberian aromaterapi lavender terhadap dismenore pada remaja putri.

Kata Kunci : Aromaterapi Lavender, Dismenore, Remaja Putri

ABSTRACT

The incidence of pain throughout the world is still very large, the percentage of pain incidence in the world is on average more than 50% or around 15.8-89.5% women in every country experience menstrual pain. The prevalence of pain in the United States is estimated at 45-90%, then in India it is 75% and in Egypt the prevalence rate has been estimated at 75%. MA Muhammadiyah Sukarame by looking at data for the last 1 year in 2021 as many as 215 respondents, with an average monthly pain of 42 young women. The purpose of this study was to determine the effect of giving lavender aromatherapy on dysmenorrhea in female students at MA Muhammadiyah Sukarame, Bandar Lampung City in 2022.

This type of research is quantitative. With a quasi-experimental research design with a nonequivalent control group design. the subject is a female student at MA Muhammadiyah, the sampling technique uses purposive sampling. The study was carried out on April 28 to July 30, 2022. The independent variables were lavender aromatherapy and the dependent dysmenorrhea. Data analysis used univariate and bivariate using Man Whitney test.

The pain scale before the lavender aromatherapy technique was carried out with a mean of 7.67, which means that some young women experience dysmenorrhea pain in the severe category. The control group with a mean of 8.60 which means that most of the young women experience dysmenorrhea pain in the severe category. The pain scale after the lavender aromatherapy technique was carried out with a mean of 1.62, which means that some young women experience dysmenorrhea pain in the mild category. Posttest control with a mean of 3.93, which means that some young women experience dysmenorrhea pain in the mild category. The results of the man Whitney statistical test obtained a p-value of 0.000 (<0.05), which means that there is an effect of giving lavender aromatherapy to dysmenorrhea in adolescent girls. For MA teachers,

Keywords : Lavender Aromatherapy, Dysmenorrhea, Female Students

INTRODUCTION

Every woman who is biologically mature must experience menstruation. Where generally occurs at the age of 12-16 years or what is called menarche. This menstrual cycle occurs periodically every month with a normal range of 28 days, while the menstrual period is between 3-7 days (Rahayu, Pertiwi, Patimah, & Kunci, 2017), meaning that the menstrual period will occur every 28 days from the beginning of the menstrual cycle. menarche" (first menstruation) and continues until the "menopause" (permanent cessation of menstruation) that is when a person is no longer menstruating due to physiological reasons related to age and fertility of the reproductive system (Cahill, 2019).

Every month, women aged 12–49 years (WUS), not pregnant and not yet menopausal generally experience menstruation. During menstruation, the problem that many women experience is discomfort or intense pain. This is commonly called dysmenorrhea (dysmenorrhea). Menstruation begins at puberty, stops briefly during pregnancy or breastfeeding and stops at menopause when a woman is about 50 years old. Menstruation generally begins at the age of 8-13 years. Individuals who have not experienced menstruation over 17 years are said to have delayed menarche. The distance from one period to the next or what is known as the menstrual cycle is different for each woman. The menstrual cycle usually lasts 21-35 days. Menstruation can be affected by certain conditions such as stress, medication and exercise. At the beginning of menstruation it is usually not regular but within a certain time the cycle will become regular (Widyasih, 2018).

The incidence of menstrual pain throughout the world is still very large, the percentage of the incidence of menstrual pain in the world is on average more than 50% or in the range of 15.8-89.5% women in each country experience menstrual pain. The prevalence of menstrual pain in the United States is estimated at 45-90%, then in India it is 75% and in Egypt the prevalence rate has been estimated at 75%. American Family Physician, 2014; Widiatami, 2018). Especially in Indonesia, the primary type of menstrual pain is 54.8% and the secondary type is 9.36%. Many women who experience dysmenorrhea do not report to health workers so that data collection on dysmenorrhea cannot be classified. The results of a survey from the Indonesian Family Planning Association (PKBI) Lampung in 2020, dysmenorrhea ranks first in complaints experienced by women, which is 23.07% (PKBI Bandar Lampung, 2020).

For MA Muhammadiyah Sukarama, there are as many as 450 female students, and every month approximately 48 young women experience dysmenorrhea complaints, this is reinforced by preliminary observations made by the author and from several reports from the local youth posyandu.

Pain when period cause discomfort in daily physical activity. These complaints relate to repeated absences at school or at work, which can impair productivity. 47% of women in their reproductive years experience menstrual pain, and 10% experience it to interfere with daily activities. Approximately 70-90% of cases of dysmenorrhea occur during adolescence and adolescents who experience dysmenorrhea will be affected by their academic, social and sports activities (Puji, 2010).

Manuaba (2014) explain that Dysmenorrhea is a feeling of pain during menstruation. Feelings of pain during menstruation in the form of mild cramps in the genitals so that there is interference in daily tasks. Dysmenorrhea is divided into 2 types, namely primary dysmenorrhea which is dysmenorrhea without genital anatomical abnormalities and secondary dysmenorrhea is dysmenorrhea accompanied by genital anatomical abnormalities.

Some women who experience menstrual pain overcome and cure it by taking anti-pain medications on a regular basis. However, the nature of the drug only relieves pain and will lead to dependence on the drug. If consumed in the long term can have negative effects on health. The use of drugs will have side effects such as stomach disorders, anemia and what is more severe is the psychological mental impact that makes the sufferer feel overwhelmed and cannot get away from the drug. They assume that in order not to have pain during menstruation, they must take medicine (Anugroho & Wulandari, 2011; Widiatami, 2020).

To overcome menstrual pain (dysmenorrhea) can be done by administering analgesic and anti-inflammatory drugs and herbal medicine therapy that has been believed to have efficacy derived from plant ingredients. Some plant materials are believed to reduce pain, namely turmeric, tamarind, cinnamon, cloves, ginger (Anurogo, 2011; Novariana, 2015). Essential oils that can reduce pain are lavender, rose, jasmine and papermint. One of the aromatherapy that is often used in nursing is lavender, because the ingredients in it such as antidepressants and antibiotics are believed to reduce anxiety and reduce pain sensations (Bakhtshinin, 2015). Research conducted by

Matsumoto (2013), states that lavender aromatherapy can improve the work of the parasympathetic nerves and increase calm within a minimum of 10 minutes. Lavender can increase alpha waves in the brain so that the body becomes relaxed and pain will be reduced (Sharma, 2009).

The application of lavender aromatherapy can reduce cortisol levels and increase estradiol which triggers a decrease in anxiety (Fukui, 2011). The aroma of lavender can also modulate the activity of cyclic adenosine monophosphate (cAMP), which has a sedative effect. Lavender scent What is inhaled and then captured by the olfactory nerves will be forwarded to the central nervous system and limbic system, namely the autonomic function of emotion (Matsumoto, 2013).

Research conducted by Yunianingrum Effect of Warm Compress And (2018) Lavender Aromatherapy Against Primary Dysmenorrhea Pain Reduction In Young Women In As Salafiyah Islamic Boarding School And Ashsholihah Islamic Boarding School Sleman. The results of this study showed that the average primary dysmenorrheal pain before and after lavender aromatherapy was given was 5.95 ± 1.214 and 4.77 ± 1.232 with an average decrease of 1.18, meaning that there was an effect of lavender aromatherapy on reducing primary dysmenorrhea pain ($p = 0.000$). The results of the mann whitney test showed $p = 0.000$, meaning that there was a difference in reducing dysmenorrhea pain with warm compresses and lavender aromatherapy.

Based on preliminary data conducted at the MA Muhammadiyah Sukarama by looking at the data for the last 1 year in 2021 as many as 215 respondents, with an average monthly pain of 42 young women.

Based on the results of a pre-survey conducted by researchers, on 10 female respondents at MA Muhammadiyah Sukarama, by conducting independent interviews, it was found that out of 8 respondents who had acted comprehensively when they felt dysmenorrhea pain, and let the pain be felt. Meanwhile, 2 respondents stated that they took pain relievers obtained at pharmacies. The use of lavender aromatherapy has not been used for pain management.

RESEARCH METHODS

This type of research is quantitative. With a quasi-experimental research design with a nonequivalent control group design. The subject is a student of MA Muhammadiyah, the sampling technique uses purposive sampling. The study was conducted on April 28 to July 30, 2022. The independent variables were lavender aromatherapy and dependent dysmenorrhea. Data analysis using univariate and bivariate using Man Witney test.

RESULTS

Characteristics of Respondents

Table 1
Characteristics of Respondents in MA Muhammadiyah Sukarama City of Bandar Lampung in 2022

Characteristics	Intervention		Pretest	Postes	P-value
	f	P (%)			
Age					
15 years	3	20.0	4.54	2.32	0.000
16 years	7	46.7	5.54	1.75	
17 years	5	33.3	6.08	2.77	
Age of Menarche					
9 years	8	53.3	3.02	0.45	0.000
10 years	6	40.0	4.01	3.02	
11 years old	1	6.7	6.54	2.75	
Cycle Menstruation					
27 Days	1	6.7	5.41	2.32	0.014
28 Days	7	46.7	3.62	1.23	
29 Days	4	26.7	4.54	1.13	
30 days	1	6.7	4.2	0.02	
31 Days	1	6.7	5.15	2.02	
32 Days	1	6.7	3.23	1.24	
Characteristics	Intervention		Pretest	Postes	P-value

	f	P (%)			
Age					
15 years	6	40.0	2.53	1.22	0.001
16 years	7	46.7	4.51	2.63	
17 years	2	13.3	5.03	1.50	
Age of Menarche					
9 years	9	60.0	5.42	1.12	0.014
10 years	5	33.3	3.51	1.03	
11 years old	1	6.7	3.52	2.01	
Cycle Menstruation					
27 Days	2	13.3	3.44	1.45	0.023
28 Days	6	26.7	4.55	2.32	
29 Days	3	20.0	5.54	1.75	
30 days	4	40.0	6.03	0.77	
31 Days	2	13.3	3.42	2.45	
32 Days	-	-	-	-	

Based on table 1 above, it is known that the age of the most respondents was 16 years as many as 7 respondents (46.7%), the age of menarche was 9 years as many as 8 respondents (53.3%) in the intervention group and as many as 9 respondents (60.0%).) in the control group, while the most menstrual cycles were 28 days as many as 7 respondents (46.7%) in the intervention group and 20 days as many as 6 respondents (40.0%) in the control group.

Univariate Analysis

Pain Intervention

From table 23 above, it can be seen that the pain scale before the lavender aromatherapy technique was carried out at MA Muhammadiyah Sukarame, Bandar Lampung City in 2022, with mean 7.67, which means that some young women experience dysmenorrhea pain in the severe category. After doing the lavender aromatherapy technique with mean 1.62 which means that some young women experience dysmenorrhea pain in the mild category.

Table 2
Pain Scale Before Lavender Aromatherapy Technique Is Done at MA Muhammadiyah Sukarame City of Bandar Lampung in 2022

Variable	N	Mean	St. Dev	Min-Max
Pretest Intervention	15	7.67	0.816	6-9
Postes Intervention	15	1.62	0.724	1-3

Pain Control

From table 3 above, it can be seen that pain in the control group at MA Muhammadiyah Sukarame Bandar Lampung City with mean 8.60, which means that some young women experience

dysmenorrhea pain in the severe category. Furthermore, in the control post with mean 3.93, which means that some young women experience dysmenorrhea pain in the mild category.

Table 3
Pain Scale Lavender Aromatherapy Technique Has Been Done At MA Muhammadiyah Sukarama Bandar Lampung City in 2022

Variable	N	Mean	St. Dev	Min-Max
Pretest Control	15	8.60	0.507	8-9
Postes Control	15	3.93	0.704	3-5

Bivariate Analysis

Table 4
Average Pain Per Day In Young Women In MA Muhammadiyah Sukarama Bandar Lampung Year 2022

Variable	N	St	Dev	Min-Max
Day 1 Intervention	15	7.67	0.816	6-9
Day 1 Control	15	8.60	0.507	8-9
Day 2 Intervention	15	4.47	0.640	3-5
Day 2 Control	15	5.27	0.704	4-6
Day 3 Intervention	15	1.67	0.724	1-3
Day 3 Control	15	3.93	0.704	3-5

Table 5
The Effect of Lavender Aromatherapy on Dysmenorrhea in Young Women at MA Muhammadiyah Sukarama City of Bandar Lampung Year 2022

Variable	N	mean	Rank	P-value
Pretest Intervention	15	7.67	10.80-20,80	0.002
Pretest Control		8.60		
Postes Intervention	15	1.67	8.27-22.73	0.000
Control Posts		3.93		

From table 5, it can be seen that the pain scale before the lavender aromatherapy technique was carried out at MA Muhammadiyah Sukarama, Bandar Lampung City in 2022, with mean 7.67, which means that some young women experience dysmenorrhea pain in the severe category, while for the control group mean 8.60, which means that some young women experience dysmenorrhea pain in the severe category.

Pain scale after lavender aromatherapy technique with mean 1.62 which means that some young women experience dysmenorrhea pain in the mild category. While in the control group with mean 3.93, which means that some young women experience dysmenorrhea pain in the mild category.

Statistical test results man witney got value p-value 0.000 (<0.05) which means there is influence

gift aroma therapy lavender to dysmenorrhea in adolescent girls at MA Muhammadiyah Sukarama, Bandar Lampung City in 2022.

DISCUSSION

Univariate Analysis

Characteristics of Respondents

Characteristics Respondent In MA Muhammadiyah Sukarama Bandar Lampung City in 2022 From the results of the study, it was found that the age of the most respondents was 16 years old as many as 7 respondents (46.7%), the most menarche age was 9 years old as many as 8 respondents (53.3%) in the intervention group and as many as 9 respondents (60.0%) in the control group, while the most menstrual cycles were 28 days as many as 7 respondents (46.7%) in the intervention group and 20

days as many as 6 respondents (40.0%) in the control group.

The results of this respondent's characteristics are in line with Silaen's (2019) research on the prevalence of dysmenorrhea and its characteristics in adolescent girls in Denpasar. A total of 74.42% of adolescent girls experience dysmenorrhea. The highest proportion of dysmenorrhea was found in adolescents aged 14-16 years, had no family history of dysmenorrhea, menarche age range was 11-12 years, and had a menstrual cycle of 7 days or more. In addition, the highest proportion of dysmenorrhea in this study was also found in the group of adolescents with normal nutritional status and groups who rarely exercised. Therefore, it can be concluded that the socialization of dysmenorrhea in adolescent girls needs to be held.

In line with the theory put forward by Zakiyah (2015) which states that the cause of pain can be based on age and gender. Age affects a person's reaction to pain. For example, young children who cannot yet pronounce words have difficulty verbally expressing and expressing their feelings, while the elderly may not report pain because pain is something they have to accept. In general, the sexes of men and women did not differ significantly in response to pain. Some cultures affect gender, for example, there are those who think that a boy must be brave and should not cry while a girl can cry in the same situation.

In the opinion of researchers, the pain experienced by respondents is because at that age, the female reproductive organs are not ready to undergo changes and there is still a narrowing of the cervix, so this condition can cause pain during menstruation. This difference in results could be due to the influence of heredity, nutritional status, and general health of the study population.

The length of menstruation can be caused by psychological or physiological factors. Psychologically, it is usually related to the emotional level of adolescent girls who are unstable when they are menstruating.

Meanwhile, physiologically it is more about excessive uterine muscle contractions or it can be said that they are very sensitive to this hormone due to the endometrium in the secretory phase producing prostaglandin hormones. Prostaglandins are formed from unsaturated fatty acids which are synthesized by all cells in the body (Anurogo, 2011). The longer menstruation occurs, the more often the uterus contracts, so the more prostaglandins are secreted. Due to excessive prostaglandins, pain occurs during menstruation (Nirwana, 2011).

Pain Scale Before Lavender Aromatherapy Technique was performed at MA Muhammadiyah Sukaram, Bandar Lampung City in 2022

Pain scale before the lavender aromatherapy technique was carried out at MA Muhammadiyah Sukaram, Bandar Lampung City in 2022, with mean 7.67, which means that some young women experience dysmenorrhea pain in the severe category. Control group with mean 8.60, which means that some young women experience dysmenorrhea pain in the severe category.

The results of the univariate analysis above are in line with the opinion expressed by Caffery (2010), stating that pain is everything that a person says about the pain and occurs anytime when someone says that he or she feels pain. Pain is a defense mechanism of the body, arises when there is damaged tissue and this will cause the individual to react by moving the painful stimulus.

The results of the univariate analysis are in line with the research conducted by Nikjou (2017) The Effect of Lavender Aromatherapy on Primary Dysmenorrhea Pain Severity: A Triple-blind Randomized Clinical Trial. Results: There was a significant difference in the mean pain severity between the treatment group and the control group after the intervention. However, students in the treatment group reported significantly reduced pain severity 2 months after the intervention ($P < 0.01$).

In this study, all adolescents experienced pain between a score of 7 on the first day of measurement. A score of 7 was mild to moderate pain experienced by adolescent girls on the first day of menstruation. This is influenced by the discharge of blood in the form of clots (tosol) causing unbearable pain in the pelvic area to the symphysis abdomen. Before being given a drink of turmeric and tamarind, some young women can endure pain by staying relaxed, but there are some young women who rest and lie in bed.

Pain Scale After Lavender Aromatherapy Technique was performed at MA Muhammadiyah Sukaram, Bandar Lampung City in 2022

Pain scale after lavender aromatherapy technique was carried out at MA Muhammadiyah Sukaram Bandar Lampung City in 2022 with mean 1.62 which means that some young women experience dysmenorrhea pain in the mild category. Post control with mean 3.93, which means that some young women experience dysmenorrhea pain in the mild category.

The results of the univariate analysis above are in line with the opinion expressed by Sarwono

(2011), 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. Menstrual pain in question is heavy menstrual pain that causes the woman to come for treatment to a doctor or treat herself with painkillers.

The results of the univariate analysis are in line with the research conducted by Maharani (2022) The Effect of Lavender Aromatherapy on Reducing Dysmenorrhea Pain. Results: From all articles it is known that there is an effect of giving lavender aromatherapy to decrease the level of dysmenorrhea pain. To reduce the pain of dysmenorrhea, one of the nonpharmacological ways is by giving lavender aromatherapy with inhalation techniques. This technique can stimulate the hypothalamus to secrete enkephalins which It acts as a natural pain reliever and produces a feeling of relaxation.

According to researchers, the meaning of a person's pain will vary greatly depending on the perception of pain itself, in this study some young women experienced a decrease in pain from day II, and III. This can be caused by different levels of pain, so it will affect the pain the next day.

While in this study there were also 3 respondents who experienced a very good reduction in pain so they did not feel pain on a scale of 3.

Pain management is currently very varied, not only by using pharmacological drugs that can have an effect on the kidneys, herbal medicines are currently in great demand because of their natural content and do not cause side effects, herbal medicines also have healing properties that are gradual and continuous. , is not only temporary and momentary.

Bivariate Analysis

The Effect of Lavender Aromatherapy on Dysmenorrhea in Young Women at MA Muhammadiyah Sukarame, Bandar Lampung City in 2022

Statistical test resultsman witneygot value p-value 0.000 (<0.05) which means that there is an effect of giving lavender aromatherapy to dysmenorrhea in adolescent girls at MA Muhammadiyah Sukarame, Bandar Lampung City in 2022.

The results of the bivariate analysis above are in line with the opinion of Caffery (2010), stating that pain is everything someone says about the pain and occurs anytime when someone says he feels pain.

Pain is a defense mechanism of the body, arises when there is damaged tissue and this will cause the individual to react by moving the painful

stimulus. Pain is often described in terms of a destructive process, tissue such as being stabbed, burning heat, twisting like emotions, feelings of fear, nausea and drunkenness (Judha, Sudarti, Fauziah, 2012). Pain assessment and management is complex, this is due to the subjective nature of pain so that the response to pain differs from one person to another. Pain is a sensory experience and unpleasant emotional states associated with actual or potential tissue damage, or described in terms of damage, or described with the occurrence of damage (Zakiah, 2015; Yantina., Putri. 2018).

According to Dewi (2013) lavender aromatherapy has advantages, namely simple, easy to use, can be stored and can be reused if experiencing dysmenorrhea. Lavender aromatherapy contains the main ingredients, namely linalyl acetate and linalool, where linalyl acetate functions to relax and relax the nervous and muscle working systems that are experiencing tension, while linalool acts as a relaxation and sedative so that it can reduce dysmenorrhea.

The results of the bivariate analysis are in line with research conducted by Christiana (2020) The Effect of Giving Lavender Aromatherapy on Menstrual Pain Levels (Primary Dysmenorrhea) in the Banyuwangi Stikes Girls Dormitory in 2020. Based on the results of research on 33 respondents before treatment with lavender aroma therapy 58% (19 respondents) experienced moderate dysmenorrhea, and after treatment with lavender aroma therapy, most 58% (19 respondents) experienced mild dysmenorrhea. From the calculation of SPSS 24 for windows with the Wilcoxon test, the value of Asymp.Sig.(2tailed) = 0.000 < 0.05 , H_0 is rejected, H_a is accepted, which means that there is an effect of giving lavender aromatherapy to the level of menstrual pain (primary dysmenorrhea).

In this study, the pain scale after the lavender aromatherapy technique was carried out at MA Muhammadiyah Sukarame, Bandar Lampung City in 2022, with mean 7.67, which means that some young women experience dysmenorrhea pain in the severe category, while for the control group mean 8.60, which means that some young women experience dysmenorrhea pain in the severe category. While in the control group with mean 5.27 and 3.39, which means that some of the young women experienced moderate pain on the 2nd day and 3rd day of measurement, they remained in the moderate pain category.

According to the researcher painful experience a significant decrease on day 3 this is due to the length of time experiencing menstruation,

causing bleeding to have decreased and resulting in reduced pain. Dysmenorrhea is rare in women who have irregular menstrual cycles. This increase in prostaglandin levels can reach 3 times, starting from the proliferative phase to the luteal phase, and even increases during menstruation. This symptom comes the day before menstruation and lasts 2 days until the end of the menstrual period

Decrease painful this because The content of lavender oil itself, besides that the pleasant smell will stimulate the thalamus to secrete enkephalins which function as natural pain relievers and

produce a feeling of well-being. Enkephalins are similar to endorphins, which are endogenous chemicals

(produced by the body) that are structurally similar to opioids. Enkephalins are thought to cause presynaptic (neurons that secrete transmitter substances) and postsynaptic (where the transmitter acts) inhibition in the dorsal horn. This process achieves inhibition by enkephalins, namely the inhibition of substances so that pain is not or reduced to be transmitted to the brain. This is in line with research conducted by Indriana Astuti and Lela (2020) that aromatherapy can reduce pain intensity.

Aromatherapy with essential oils Lavender is believed to have a relaxing effect on tense nerves and muscles. Aromatherapy which is applied through inhalation techniques causes receptor cells to enter the nose so that they are stimulated and then impulses are channeled through the olfactory channel, the emotional middle of the brain or the limbic system so that the hypothalamus is stimulated and releases endorphins and serotonin, this causes pain to decrease, because the function of endorphins itself is to kill natural pain, besides the hormone serotonin can also improve mood, become more relaxed and calmer.

The control group also experienced a decrease in dysmenorrhea pain, but it was not significant with the results mean 5.27 and 3.39, which means that some of the young women experienced moderate pain on the 2nd day and 3rd day of measurement, they remained in the moderate pain category. This decrease in dysmenorrhea pain can occur due to the length of the day/time of the menstrual period, so that it will reduce the pain felt by adolescents.

Whereas difference score between respondents with reduced pain 2 or 3 scores in each respondent this could be due to the different characteristics of the respondents, such as age and menstrual cycle. Of the 30 respondents in the intervention and control groups who have moderate pain, the age range is 15-17 years. Women who are

older will experience changes in hormones and reproductive organs and will often experience menstruation, the cervix will widen, so that in old age the incidence of dysmenorrhea rare. Teenagers who just got their period do not always experience regular menstrual bleeding periods every month because hormones are still fluctuating. Some women feel pain like cramps when they menstruate. Usually this pain is not too severe and does not last long.

The incidence of dysmenorrhea is due to not reaching biological maturity. Early menarche age increases the risk of dysmenorrhea, besides early menarche can increase the risk of fibroids. This is in accordance with research by Sopia et al (2013) which states that the ideal age for a woman to experience menarche is between the ages of 13-14 years.

Normal menstrual cycle with a cycle of 28-31 days. The menstrual cycle is the time from the first day of menstruation until the arrival of the next menstrual period. Menstrual cycle disorders are problems that occur in women's menstrual cycle patterns which include polymenorrhea (35 days), and amenorrhea (> 3 months). The longer menstruation occurs, the more often the uterus contracts, as a result, the more prostaglandins are secreted. As a result of excessive production of prostaglandins, pain occurs. In addition, continuous uterine contractions also cause the blood supply to the uterus to stop temporarily, resulting in primary dysmenorrhea.

CONCLUSION

Pain scale before the lavender aromatherapy technique was carried out at MA Muhammadiyah Sukarama, Bandar Lampung City in 2022, with mean 7.67, which means that some young women experience dysmenorrhea pain with severe category. Control group with mean 8.60, which means that some young women experience dysmenorrhea pain in the severe category. Pain scale after the lavender aromatherapy technique was carried out at MA Muhammadiyah Sukarama, Bandar Lampung City in 2022 with mean 1.62 which means that some young women experience dysmenorrhea pain in the mild category. Post control with mean 3.93, which means that some young women experience dysmenorrhea pain in the mild category. Statistical test results man whitney got value p -value 0.000 (<0.05) which means that there is an effect of giving lavender aromatherapy to dysmenorrhea in adolescent girls at MA Muhammadiyah Sukarama, Bandar Lampung City in 2022.

SUGGESTION

As information material for research institutions to disseminate information massively in providing health promotion regarding the management of dysmenorrheal pain in adolescent girls through IEC, mass media and leaflets. For local MA Muhammadiyah students, they can maximize the use of lavender aromatherapy as an alternative nonpharmacological treatment in reducing dysmenorrhea pain in adolescent girls. This study is expected to be used as a new finding as a management of dysmenorrhea pain in adolescent girls with non-pharmacological treatment. Can add insight into further research and can be used as reference material for the same research by increasing the research time and number of samples so that better research results are obtained.

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