Indonesian Journal of Global Health Research
Volume 7 Number 2, April 2025
e-ISSN 2715-1972; p-ISSN 2714-9749
http://jurnal.globalhealthsciencegroup.com/index.php/IJGHR

THE EFFECT OF DYSMINORE GYMNASTICS ON MENSTRUAL PAIN IN YOUNG GIRLS IN GRADES VII AND VIII

Ade Marlisa Rahmadayanti*, Titin Apriyani
Sekolah Tinggi Ilmu Kesehatan Abdurahman Palembang Jl. Kolonel H. Barlian Sukajaya, Suka Bangun, Sukarami, Palembang, Sumatera Selatan 30114, Indonesia
*adejasmine6392@gmail.com

ABSTRACT
Dismenorrhea is pain in the pelvic region due to menstruation and the production of prostaglandins. Dismenorrheic exercise is a physical exercise activity that can relieve menstrual pain. During exercise, endorphins are produced in the body. Endhorpin acts as a natural sedative and can make you feel comfortable. This study aims to find out the effect of dysmenorrheic gymnastics on menstrual pain in teenage daughters. The research design used was a quasi-experiment with a two-group pre-test-post-test design and sampling using non probability Sampling method with a total sampler technique consisting of 30 students of classes VII and VIII in Bakti Mother 2 Palembang High School, samples were divided into two groups, 15 control groups and 15 intervention groups. The average menstrual pain in the intervention group was 4.60 and after exercise disminored 3.13, in the control group the average pre-test was 3.33 and after the post-test 3.20. Data analysis using the wilcoxon test showed that there was a significant value in the intervention group with a p-value of 0,000, whereas in the control group there was no significant value with the p- value of 0.157. It is expected that adolescents who experience menstrual pain will be able to deal with non-pharmacological treatments such as dysmenorrheic gymnastics, thereby reducing pain and the use of pharmacological drugs that have side effects.

Keywords: adolescents; dysminorrhea; gymnastics

How to cite (in APA style)
Rahmadayanti, A. M., & Apriyani, T. (2025). The Effect of Dysminore Gymnastics on Menstrual Pain in Young Girls In Grades VII and VIII. Indonesian Journal of Global Health Research, 7(2), 371-380. https://doi.org/10.37287/ijghr.v7i2.4944.

INTRODUCTION

Adolescence is one of the periods of human development, which is a period of change or transition from childhood to adulthood that includes biological, psychological, and social changes. Adolescence usually begins at around 10–13 years old and ends at 18–22 years old1One of the stages of human development is adolescence. Where during this period there will be biological, psychological, and social changes as well as the transition from childhood to adulthood. Typically, adolescence begins between the ages of 10 and 13 and ends between the ages of 18 and 22 1. The incidence of menstrual pain in the world is very large with the average woman experiencing primary menstrual pain more than 50%. The prevalence of menstrual pain varies from country to country, such as in the United States the prevalence is approximately 85%, in Italy the prevalence is around 84.1%, and in Australia it is around 80%. The prevalence in Asia is approximately 84.2% with specifications occurring in Northeast Asia around 68.7%, in Middle East Asia around 74.8% and in Northwest Asia around 54.0%. In addition, Southeast Asian countries also have different prevalences, such as in Malaysia it has a prevalence of 69.4%, Thailand 84.2%, and in Indonesia 64.25% consisting of 54.89% of primary dysmenorrhea and 9.36% of secondary menstrual pain 2.

The incidence rate of menstrual pain in Indonesia is 64.25% consisting of 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhea. The incidence of primary menstrual pain reached 54.89%, while the rest were secondary type sufferers, which resulted in them being unable to do any activities and this would reduce the quality of life in each individual 3.The incidence of dysmenorrhea in women in South Sumatra in 2021 was 64.3% 4. This shows that there is an increase in the percentage of dysminores in women in South Sumatra Province in one year. Based on data from the Palembang City Health Office, the incidence of dysminore in women of productive age is 56.2% 5.The impact that occurs if dysmenorrhea is not treated is disruption of daily life activities such as menstrual retrograde (menstruation moving backwards), infertility (infertility) and infection. Apart from the above impacts, emotional conflicts, tension and anxiety can all play a role and cause uncomfortable and unfamiliar feelings. Thus, anxiety, unhappiness or depressed feelings are not uncommon. Therefore, dysmenorrhea must be handled so that there is no impact like the things above. The nature and degree of this pain varies, ranging from mild to severe 6.

Menstrual pain management can be given in two ways: drug therapy (pharmacology) and non-pharmacological therapy. Pharmacological treatment includes hormonal therapy or anti-inflammatory or analgesic drugs (NSAIDs), such as ibuprofen, mefenamic acid, and aspirin, which are often used to treat menstrual pain. Non-pharmacological treatments include alternative and complementary therapies, which may include relaxation of the breath. Dysmenorrhea exercises can also be used to treat dysmenorrhea 7.Dysmenorrhea exercises can reduce pain intensity through a mechanism that is by relaxing the muscles that experience spasm caused by increased Prostaglandins so that vasodilation of blood vessels occurs and will increase blood flow to areas that experience spasms and ischemia 6.Based on the results of a preliminary study conducted on 34 students in grades VII and VIII who had menstruated at SMP Bakti Ibu 2 Palembang through interviews, it was found that almost all respondents experienced dysmenorrhea with different symptoms such as abdominal pain, dizziness, nausea and vomiting, diarrhea, low back pain and decreased appetite. The purpose of this study is to determine the effect of dysmenorrhea gymnastics on menstrual pain in adolescent girls in grades VII and VIII at SMP Bakti Ibu 2 Palembang.

METHOD

This research was conducted on March 28–May 1, 2024. The research used in this research is Quasi Experiment. Retrieval method Non Probability Sampling with a total sampling technique, the approach carried out in this study is by using the technique two group Pre Test and Pos Test Design, with a quantitative approach. Pain scale measurement before and after a dysmenorrhea exercise intervention using the Numeric Rating Scale (NRS). The target population in this study is all students in grades VII and VIII who have menstruated at SMP Bakti Ibu 2 Palembang as many as 30 people. The sample in this study was carried out by means of total sampling, which is a sampling technique when all members of the population are used as samples (Sugiyono, 2016). So the total sample in this study is 30 samples. The questionnaire used is the Numeric Rating Scale (NRS) and has been tested for reliability, namely the r value > 0.70 in the reliability test using test-retest shows that NRS is a reliable instrument, while its validity with the NRS pain scale shows r=0.90 so that the NRS instrument is a valid instrument.

RESULT

Univariate Analysis

Distribution of frequency and average menstrual pain before and after in the intervention group of classes VII and VIII at SMP Bakti Ibu 2 Palembang.

Table 1.
Distribution of Frequency of Menstrual Pain Before and After in the Intervention Group

It	Intervention Groups	Pre-Test		Post-Test	
		f	%	f	%
1.	Mild pain	1	6 %	10	67 %
2.	Moderate pain	14	94%	5	33 %
	Total	15	100%	15	100%

Based on table 1 above, in the intervention group of 15 people, almost all respondents experienced moderate pain as many as 14 respondents (94%), 1 person (6%) respondents experienced mild pain before doing dysminore exercises and After doing dysminore gymnastics, most of the respondents experienced a decrease in menstrual pain to mild pain as many as 10 people (67%) and as many as 5 people (33%) experienced moderate pain.

Table 2.
Mean menstrual pain before and after in the intervention group

Pain	*N*	*Median*	*Mean*	*Difference Mean*	*Minimum Value*	*Maximum Value*
Pre-test	*15*	*4.00*	*4.60*	*1.47*	*3*	*6*
Post-test	*15*	*3.00*	*3.13*		*1*	*5*

Based on Table 2 above, it is known that the average pain Menstruation experienced by young women before and after the intervention group (dysmenorrhea exercises), which was on average moderate pain (4.60), while after dysmenorrhea exercises, the average pain of the respondents was mild pain (3.13). The average difference between the before and after intervals in the intervention group was (1.47).Distribution of Frequency and Average Menstrual Pain Before and After in the Control Group in Adolescent Girls in Grades VII and VIII at SMP Bakti Ibu 2 Palembang.

Table 3.
Distribution of Frequency of Menstrual Pain Before and After in the Control Group

It	Control Group	Pre-Test		Post-Test	
		f	%	f	%
1.	Mild pain	7	46	7	46
2.	Moderate pain	8	54	8	54
	Total	15	100	15	100

Based on table 3 above, in the control group of 15 people, some of the respondents experienced moderate pain as many as 8 respondents (54%), 7 people had mild pain 46% before the test and after the test almost all respondents still experienced moderate pain as many as 8 respondents (54%), 7 people had mild pain 46%.

Table 4.
Mean Menstrual Pain Before and After in the Control Group (NoDysmenorrhea Gymnastics)

Pain	N	Median	Mean	Difference Mean	Minimum Value	Maximum Value
Pre-test	15	4.00	3.33	0.13	1	6
Post-test	15	4.00	3.20		1	5

Based on Table 4 above, it is known that the average pre-test menstrual pain experienced by adolescent girls before and after in the control group is at the average moderate pain (3.33), while after dysmenorrhea exercises, the average pain of the respondents is mild pain (3.20). The mean difference between the before and after intervals in the intervention group was (0.13).

Table 5.
The Effect of Dysmenorrhea Gymnastics on Menstrual Pain in Puri Adolescents in Grades VIII and VIII at SMP Bakti Ibu 2 Palembang in the Intervention Group and Control Group

Group	Pre-Test Menstrual Pain					Post-Test Menstrual Pain					P Value
	Mild pain		Moderate pain		Mean	Mild Pain		Moderate Pain		Mean	
	f	%	f	%		f	%	f	%		
Intervention	1	6	14	94	4.60	10	67	5	33	3.13	0,000
Control	7	46	8	54	3.33	7	46	8	54	3.20	0,157

Based on the output of the data above, it is known that Asymp.sig. (2-tailed) intervention group with a value of 0.000 because the value of 0.000 is smaller than ≤ 0.05, so it can be concluded that "Ha accepted" means that there is a difference in the results of the dysmenorrhea scale of female students for pre-test and post-test, so it can be concluded that "there is an effect of dysmenorrhea exercises on menstrual pain in adolescent girls in grades VII and VIII at SMP Bakti Ibu 2 Palembang. Meanwhile, Asymp.sig. (2-tailed) control group found that the significance value was >0.05, i.e. with P value=0.157, then it can be concluded that "Ho is accepted" means that there is no before and after influence on the control group.

DISCUSSION

Distribution of Frequency and Average Menstrual Pain Before Dysmenorrhea Exercises in the Intervention Group and Control Group

Based on table 1 shows that menstrual pain before dysminore gymnastics is carried out in the intervention group students at SMP Bakti Ibu 2 Palembang with a total of 15 respondents, the pretest results were obtained 4.60 some respondents experienced menstrual pain on a scale of 3 with the number of respondents 1 (6.6%), This shows that there is 1 respondent who feels that the disorder is sufficiently eliminated by distraction. Meanwhile, 7 repondents experienced menstrual pain on a scale of 4 (46.6%) where pain could be ignored by doing activities/work. In the other 4 respondents, they felt a pain scale of 5 (26.6%) which showed that the pain felt could not be ignored for 30 minutes and the greatest menstrual pain scale was on a scale of 6 with the number of recurrents 3 (20%), this showed that the respondents experienced pain that could not be ignored for a long time, but could still work.

Meanwhile, the results of the study in the control group were known that the average menstrual pain experienced by adolescent girls in the control group (not dysmenorrhea) was moderate pain (3.33). The results showed that the average dysmenorrhea pain experienced by adolescent girls in the control group (not exercising dysmenorrhea) was a minimum value of 1 (mild pain scale) and a maximum value of 6 (moderate pain scale). This shows that the average dysmenorrhea pain experienced by female students at SMP Bakti Ibu 2 Palembang in the control group is moderately scale dysmenorrhea pain. It is known that there were 2 respondents who experienced changes in the control group (not given dysmenorrhea exercises), namely respondent 1 who experienced moderate pain on the pain scale 4 while previously experiencing moderate pain on the pain scale of 5 and respondent 2 also experienced changes in the pain scale before the scale of 6 and on the next menstruation the pain scale 5. This can happen due to factors such as respondents taking pain relievers and anticipating them in advance because of their experience in the previous month, in addition to

the limitations of research that cannot fully control what respondents do during overcoming menstrual pain.

Dysmenorrhea/menstrual pain is pain in the pelvic area due to menstruation and the production of prostaglandins. It often starts immediately after having your first period (menarche) 8. In primary dysmenorrhea, menstrual pain is pain without the discovery of a pathological condition in the pelvis related to the ovulation cycle and is caused by myometrium contractions so that ischemia occurs due to the presence of protaglandins produced by the endometrium of the secretory phase. The molecule that plays a role in dysmenorrhea is prostaglandin F2a which always stimulates uterine contractions, while prostaglandin E inhibits uterine contractions. There is an increase in prostaglandin levels in the endometrium during the transition from the proliferation phase to the secretion phase, usually during the first 48 hours of menstruation9. The pain caused comes from the uterine muscles, like all other muscles, the uterine muscles can contract and relax, in addition to some of the factors that cause pain include psychiatric factors, physical factors, canal obstruction factors and others 10. One of the risk factors that occur in primary dysminore is menarche and the menstrual cycle. Women who have menarche younger than 12 years have a higher risk of primary dysmenorrhea compared to women who menarche at more than 12 years of age (Larasati & Faridah, 2016) in 10. Women who experience menarche at an early age tend to be exposed to prostaglandins for longer, high levels of prostaglandins can cause pain and abdominal cramps, according to that A woman who has excessive estrogen and progesterone can allow menstruation to occur in a faster time called polymenorrhea. Polymenorea is a condition in which a woman experiences a more frequent or shorter menstrual cycle, which is less than 21 days, while a menstrual cycle that lasts more than 35 days is called oligomenorrhea. The longer the menstrual cycle, the more prostaglandins will be released, which will cause pain.

Menstrual pain in adolescent girls, if not treated, will cause various complaints, difficulty concentrating on learning, and have an impact on psychology in the form of emotional conflicts, tension, anxiety, feelings of discomfort and alienation. This requires proper management during menstrual pain such as using pharmacological and non-pharmacological handlers. Pharmacological treatment, if taken for a long time, will cause side effects, while non-pharmacological treatment has no side effects if taken for a long time. In non-pharmacological treatment to treat menstrual pain, for example, hypnotherapy and warm water compresses that can relieve menstrual pain by relaxing the body and dilating blood vessels. In addition, dysminor gymnastics can also relieve pain more effectively because when doing dysminor exercises, the body will release endorphins and encephalin hormones so that the body will form a pain suppression system and in doing dysminore gymnastics, blood flow will be smooth and vasodilation will occur in blood vessels that experience spages and ischemic diseases.

In line with the research conducted 11, about the dysmenorrhea gymnastics he carried out on reducing the scale of pain in adolescents at the Darul Haffad Padang Lawas Islamic Boarding School in the northern part. At the time of the pre-test in the treatment group of 10 respondents, all respondents were in moderate pain and in the control group of 10 respondents, all respondents were in moderate pain.In line with research 12, about the Effect of Dysmenorrhea Gymnastics on the Decrease in the Rate of Dysmenorrhea in female students at the Islamic University of Indonesia dysmenorrhea gymnastics is carried out 3 times a week with a time of 35 minutes a day. When the pre-test was carried out in the intervention group, the mean was 4.87 and the average in the control group was 5.00.±

According to the researcher's assumption, the researcher suspects that there is a difference in the average menstrual pain between the control group and the intervention group, this is because when doing dysminore exercises, the body will produce endorphin hormones that function to reduce the pain felt by the respondents. In addition, doing dysmenorrhea exercises will increase the volume of blood flowing throughout the body, including in the reproductive organs so as to facilitate the supply of oxygen to the blood vessels, there is a vasoconstriction of the brain and the arrangement of nerves in the spine which can function as a natural sedative produced by the brain which can cause a sense of comfort during menstruation.Distribution of Frequency and Average Dysmenorrhea Pain After Dysmenorrhea Exercises in the Intervention Group and Control GroupBased on table 2, after dysmenorrhea exercises were carried out in the intervention group, the average pain of the respondents was mild pain (3.13) with the previous average value (4.60). This showed that there was a decrease in pain in the intervention group, which showed that dysmenorrhea exercises had an effect or influence on dysmenorrhea pain experienced by adolescent girls.

Based on the results of the study, it is known that the average menstrual pain experienced by adolescent girls in the control group (not dysmenorrhea) is mild pain (3.33) and after menstruation the following month also experiences mild pain (3.20). The results showed that the average dysmenorrhea pain experienced by adolescent girls in the control group (not dysmenorrhea) was a minimum value of 1 (mild pain scale) and a maximum value of 5 (moderate pain scale). This showed that there was no significant difference in pain before and after (no dysminor exercises) in the control group.Dysmenorrhea gymnastics is a physical exercise activity that can relieve menstrual pain. When exercising, Endorphins produced in the body. Endhorpin It works as a natural sedative and can create a sense of comfort. Physical exercise has a significant relationship with a decrease in the level of muscle fatigue so that muscle fatigue occurs, so dysmenorrhea exercises are needed to relieve the cramps, dysmenorrhea exercises are muscle stretching exercises, especially in the abdomen which is carried out for ± 30 minutes. This exercise is designed to increase muscle strength, endurance and muscle flexibility so that it can reduce dysmenorrhea 11.

The results of this study are in line with the research 11from The results of the study showed that 10 respondents experienced a decrease in pain intensity from moderate pain to mild pain. Meanwhile, in the control group after being post-tested, 10 respondents remained in moderate pain. So it can be interpreted that there is an effect of dysmenorrhea exercises on reducing the scale of pain in adolescent girls. One of the exercise mechanisms for dysmenorrhea is to relax the muscles that are experiencing spasms due to increased prostaglandins, which cause vasodilation of blood vessels and increase blood flow to areas where seizures and ischemia occur. In line with research 12, about the Effect of Dysmenorrhea Gymnastics on the Decrease in the Rate of Dysmenorrhea in female students at the Islamic University of Indonesia dysmenorrhea gymnastics is carried out 3 times a week with a time of 35 minutes a day. The average pres-TST of the intervention group was 4.87, the average post-test was 1.73 with an average difference of 3.14 and the average pre-test in the control group was 5.00, the average post-test was 4.93 and the average difference of the control group was 0.07. This proves that there is an effect on the intervention group where when doing physical exercises will produce endorphins, which make the respondents more relaxed and comfortable.±

According to the researcher's assumption, respondents who did not exercise before menstruation 2x had the potential to experience more menstrual pain compared to respondents who did dysminor exercises a week before menstruation, this is because when doing

dysminore exercises, the body will increase the level of β- endorphins in the body to reduce menstrual pain. Meanwhile, respondents who did not do dysminore exercises did not experience a reduction in menstrual pain because the body did not produce enough endorphins to reduce pain.

The Effect of Dysmenorrhea Gymnastics on Menstrual Pain in Puri Adolescents in Grades VII and VIII at SMP Bakti Ibu 2 Palembang

Based on the output of the Statistical Test, the intervention group in this study is known to be Asymp.sig. (2-tailed) has a value of 0.000 because the value of 0.000 is smaller than ≤ 0.05, so it can be concluded that "Ha accepted" means that there is a difference in the results of menstrual pain of female students for pre-test and post-test, so it can be concluded that "there is an effect of dysmenorrhea gymnastics on menstrual pain in adolescent girls in grade 7 and at SMP Bakti Ibu 2 Palembang. Meanwhile, the output of the Statistical Test of the control group is known to Asymp.sig. (2-tailed) has a value of 0.157 because the value of 0.000 is greater than ≤ 0.05, so it can be concluded that "Ho is accepted" means that there is no difference in the results of menstrual pain of female students for pre-test and post-test, so it can be concluded that "there is no effect of dysmenorrhea exercise on menstrual pain in adolescent girls in the control group (no dysminore exercises).Dysmenorrhea gymnastics is a physical exercise activity that can relieve menstrual pain. When exercising, Endorphins produced in the body. Endhorpin It works as a natural sedative and can create a sense of comfort. Physical exercise has a significant relationship with a decrease in the level of muscle fatigue so that muscle fatigue occurs, so dysmenorrhea exercises are needed to relieve the cramps, dysmenorrhea exercises are muscle stretching exercises, especially in the abdomen which is carried out for ± 30 minutes. This exercise is designed to increase muscle strength, endurance and muscle flexibility so that it can reduce dysmenorrhea 11.

Dymenorrhea exercises can reduce pain intensity through a mechanism by relaxing muscles that experience spasms caused by an increase in prostaglandins so that vasodilation of blood vessels occurs and will increase blood flow to areas experiencing spasms and ischemic diseases. In addition, when doing an exercise in this case dysmenorrhea exercises, the body will release endogenous opoids, namely endorphins and encephalin produced in the brain and spinal cord. These substances have morphine-like properties with analgetic effects that form a pain-suppressing system 13.Based on research conducted 11, about the dysmenorrhea gymnastics that he carried out on the reduction of pain scale in 20 adolescents at the Darul Haffad Padang Lawas Islamic Boarding School in the northern part, 10 respondents in the treatment group of 10 respondents in the control group Dysmenorrhea gymnastics was carried out for 3 days for 30 minutes given before menstruation. The results of the study conducted on the respondents showed that the intensity of dysmenorrhea pain decreased after 3 days of treatment with dysmenorrhea exercises with Sig (2-tailed) of 0.002. Through Body dysmenorrhea exercises will relax the muscles that are experiencing spasms due to the increase in prostaglandins, which cause vasodilation of blood vessels and increase blood flow to the area where seizures and ischemia occur.

In line with research 12, about the Effect of Dysmenorrhea Gymnastics on the Decrease in the Rate of Dysmenorrhea in female students at the Islamic University of Indonesia dysmenorrhea gymnastics is carried out 3 times a week with a time of 35 minutes a day. There was an effect of dysmenorrhea gymnastics on the decrease in the rate of dysmenorrhea in nursing students in the VIII semester of the Indonesian Muslim University before and after being given dysmenorrhea exercises with p=0.000. Where when doing gymnastics, the body will produce endorphins, which make respondents more relaxed and comfortable.±In line with

research 14, about The Effect of Dysmenorrhea Gymnastics on Reducing Menstrual Pain in Adolescent Girls Dysmenorrhea Gymnastics is carried out 3-5 times in a row for one week before menstruation in order to help reduce and overcome dysmenorrhea, especially in adolescents who experience dysmenorrhea. When doing gymnastics, the body will produce endorphins, higher endorphin hormones will lower or relieve the pain felt by a person so that a person becomes more comfortable, happy, and smooths the delivery of oxygen to the muscles. The results of this study showed that there was an effect of dysmenorrhea gymnastics on the reduction of dysmenorrhea pain experienced before and after being given dysmenorrhea gymnastics treatment in class X adolescent girls at SMK Jamaah Pasrah Pati Uji Mann-Whitney obtained a p value of < α, which was 0.001 < 0.05, meaning that there was an effect after doing gymnastics.

Doing gymnastics regularly by paying attention to movements, the frequency of gymnastics that should be done as much as 3 times in 1 week before the next menstruation with the right duration of time to carry out dysmenorrhea exercises is about ±30 minutes, these factors will produce many benefits for the body. One of the benefits of dysmenorrhea gymnastics is that it can reduce the pain felt during menstruation 15. An increase in prostaglandin levels occurs at the end of the luteal phase or in the menstrual phase, namely on the 28th day to the 2nd or 3rd day of the menstrual cycle. The clinical picture of primary dysmenorrhea includes the onset immediately after the first menstruation and usually lasts about 48-72 hours, often starting within a few hours before and shortly after menstruation. An increase in prostaglandin levels balanced with dysmenorrhea exercises that produce endorphins can reduce pain 9.Dymenorrhea exercises can reduce pain intensity through a mechanism by relaxing muscles that experience spasms caused by an increase in prostaglandins so that vasodilation of blood vessels occurs and will increase blood flow to areas experiencing spasms and ischemic diseases. In addition, when doing dysmenorrhea exercises, the body will release endogenous opoids, namely endorphins and encephalin produced in the brain and spinal cord. These substances have morphine-like properties with analgetic effects that form a pain-suppressing system 13.

The researchers assumed that respondents who did dysminore exercises before menstruation experienced a more significant decrease in pain intensity compared to respondents who did not do the exercises. This is because dysminore gymnastics can stimulate the body to release endorphins, known as pain-relieving hormones. Endorphin hormones work by inhibiting the transmission of pain to the brain, thereby providing an analgesic effect and increasing feelings of comfort. By doing dysminore exercises regularly, respondents can feel a more consistent reduction in pain during menstruation.In addition, dysminore gymnastics also plays a role in relaxing and relaxing the muscles around the abdomen, pelvis, and waist which are often the center of pain during menstruation. Disminore gymnastics can be a useful intervention in managing pain if done regularly. Respondents who consistently do this exercise will feel a greater increase in menstrual pain management compared to those who do not do dysminor exercises.

CONCLUSION

Based on the results of the research and discussion of the effect of dysmenorrhea exercises on menstrual pain in adolescent girls in grades VII and VIII at SMP Bakti Ibu 2 Palembang, the following conclusions can be made: The average menstrual pain experienced by adolescent girls in the intervention group (dysmenorrhea exercises) before dysmenorrhea exercises was moderate pain with an average value of (4.60) and after dysmenorrhea exercises was mild pain with an average value of (3.13). The average menstrual pain experienced by adolescent

girls in the control group (not exercising dysmenorrhea) before the pre-test was (3.33) which was in the classification of moderate pain and after the post-test the average value was (3.20) which was still in the classification of moderate pain. Based on the output value, it is known that Asymp.sig. (2-tailed) with a value of $0.000 \leq 0.05$, it means that there is an effect before and after dysmenorrhea exercises on the intervention group and the output of the control group is known to be Asymp.sig. (2-tailed) is $0.157 \geq 0.05$, which means that there is no effect before and after dysmenorrhea gymnastics at SMP Bakti Ibu 2 Palembang

REFERENCES

Ministry of Health of the Republic of Indonesia. Menstrual pain or dysminore. Ministry of Health of the Republic of Indonesia (2022) Doi:97724601000002.

Tsamara, G., Raharjo, W. & Putri, E. A. (2020). The Relationship between Lifestyle and the Incidence of Primary Dimenorrhea in Female Students of the Medical Education Study Program, Faculty of Medicine, Tanjungpura University. J. Nas. Health Sciences. 2, 130–140.

Nurvadila, P., Virawati, D. I. & Satriani, S. (2023). Increasing the knowledge of grade VII students and reducing the primary dysmenorrhea pain scale using dysmenorhea gymnastics videos. J. Malacci Midwifery 4, 98.

Fahni, D. A., Idriansari, A. & Andhini, D. (2022). The level of knowledge of adolescent girls who received education on Maps For Education 'Dysmenorrhea'. Nursing Faculty. Dock. Sriwij University. 111–118.

Sriandini, W. (2021). Effect of Dark Chocolate Beverage Consumption on Reducing Primary Dysmenorrhea Pain Scale. Media Husada J. Nurs. Sci. 2, 40–45.

Luli, N. U. R. A. (2020). The Relationship between Physical Activity and the Level of Disminore in Grade XII Students of SMK Negeri 2 Godean Sleman Yogyakarta. A. Health. Aisyiyah University Yogyakarta 2.

Noviani, A. (2022). Health Education on How to Overcome Menstrual Pain (Dysmenorrhea) with Non-Pharmacological Therapy in Man 1 Karanganyar. Buguh J. Pengabdi. Kpd. Masy. 2, 25–30.

Rejeki, S. & Eldaniati. (2018). The Effect of Dysmenorrea Gymnastics on the Intensity of Menstrual Pain in Female Students at the K.H Sahlan Rosjidi Islamic Boarding School, University of Muhammadiyah Semarang. Prodising Semin. Nas. Univ. Muhammadiyah Semarang 1, 183–193.

Sinaga, E., Saribanon, N. & Suprihatin. (2017). Menstrual Health Management. (IWWASH National University.

Nur Salamah, Q. (2021). Factors Affecting the Occurrence of Primary Dysmenorrhea in Students of the Public Health Study Program of UIN Syarif Hidayatullah Jakarta in 2021.

Sari, Indah Dewi, Nurrahmaton, Harahap, Novy Ramini & Istiqomah, U. (2023). Dysmenorrhea Gymnastics on Reducing Pain Scale in Adolescents. J. Matern. Midwifery 8, 177–182.

Nurfiana, T., Jama, F. & Sunarti. (2021). The Effect of Dysmenorrhea Gymnastics on Reducing the Rate of Dysmenorrhea. Wind. Nurs. J. 02, 186–197.

Sugiharti, R. K. (2020). Dysparetic gymnastics in lowering the scale of menstrual pain in adolescents. J. Heal. Res. 3, 17–24.

Saraswati, D. P., Anggraini, W. & Maulinda, A. V. (2023) The Effect of Dysmenorrhea Gymnastics on the Reduction of Menstrual Pain in Adolescent Girls in Class X at SMK Jamaah Pasrah Pati. J. Researcher. Service. Midwife 01, 15–20.

Kristina, I., Simbolon, M., Asnita, Hertanta & Nduma, S. (2020). The Effect of Dysmenorrhea Gymnastics on Reducing the Intensity of Primary and Secondary

Menstrual Pain in Adolescents of Trisaksi Medan High School, North Sumatra Province. Religion. Health. J. Midwifery and Nursing 11, 644–652.

Sahir, S. H. (2022). Research Methodology (T. Koryati (Ed.); 1st Ed.). Kbm Indonesia Publisher.

Saraswati, D. P., Anggraini, W., & Maulinda, A. V. (2023). The Effect of Dysmenorrhea Gymnastics on the Reduction of Menstrual Pain in Class X Adolescent Girls at SMK Jamaah Pasrah Pati. Journal of Midwife Service Research, 01(01), 15–20. Https://Jppb.Stikesbup.Ac.Id/Index.Php/Jppb/Article/View/59

Sari, Indah Dewi, Nurrahmaton, Harahap, Novy Ramini, & Istiqomah, U. (2023). Dysmenorrhea Gymnastics on Reducing Pain Scale in Adolescents. Journal of Midwifery Maternity Studies, 8(2), 177–182. Https://Doi.Org/2599-1841

Silviana, D. (2021). The Effect of Dysmenorrhea Gymnastics on the Scale of Dysmenorrhea in Sman 5 South Solok. Andalas University. Https://Scholar.Google.Com/Scholar?Hl=Id&As_Sdt=0%2c5&Q=Pengaruh+Senam+Dismenore+Terhadap+Skala+Dismenore+Di+Sman+5++Solok+Selatan+&Btng=

Silviana, D. (2021b). The Effect of Dysmenorrhea Gymnastics on the Scale of Dysmenorrhea in Female Students at SMAN 5 South Solok. Journal of Andalas University, 2(6).

Sinaga, E., Saribanon, N., & Suprihatin. (2017). Menstrual Health Management (1st Ed.). Iwwash National University. Http://Ppi.Unas.Ac.Id/Wp-Content/Uploads/2017/06/Buku-Manajemen-Kesehatan-Menstruasi-Oke.Pdf

Sriandini, W. (2021). Effect of Dark Chocolate Beverage Consumption on Reducing Primary Dysmenorrhea Pain Scale. Media Husada Journal Of Nursing Science, 2(1), 40–45. Https://Doi.Org/10.33475/Mhjns.V1i2.33

Sugiharti, R. K. (2020). Dysparetic gymnastics in lowering the scale of menstrual pain in adolescents. Journal Of Health Research, 3(2), 17–24. Https://Jurnal.Stikesmus.Ac.Id/Index.Php/Avicenna

Sugiyono. (2021). Quantitative, Qualitative, and Rnd Research Methods (3rd Ed.). Bandung: Alfabeta.

Swandari, A. (2022). Textbook on Physiotherapy Intervention in Cases of Dysmenorrhea (K. Siwi, F. Putri, & Nurul Fajri Romadhona (Eds.); 1st Ed.). Https://P3i.Um-Surabaya.Ac.Id/Assets/Files/596df149-7c4a-11ed-Ba29-000c29cc32a6_Buku Teaching Dysmenorrhea Send Pak Dayat1.pdf

Tsamara, G., Raharjo, W., & Putri, E. A. (2020). The Relationship between Lifestyle and the Incidence of Primary Dimenorrhea in Female Students of the Medical Education Study Program, Faculty of Medicine, Tanjungpura University. National Journal of Health Sciences (Jnik), 2(3), 130–140.

Vionica, S., & Wulandari, P. (2022). The application of dysmenorrhea gymnastics to reduce dysmenorrhea pain and anxiety in adolescents in Merbuh Village. The2nd Widya HusadaNursingConference(2nd WHNC), 99–106.

Who. (2020). Adolescent Health. Word Health Organization. https://www.who.int/health-topics/adolescent-health#tab=tab_1

Wulanda, C., Luthfi, A., & Hidayat, R. (2020). The effectiveness of dysmenorrhea exercises in the morning and evening on the treatment of menstrual pain in adolescent girls during menstruation at SMPN 2 Bangkinang Kota in 2019. Tambusai Health Journal, 1(1), 1–11.