

THE INFLUENCE OF AMIRKAN GYMNASTICS (ANTI DYSMENORRHEA FOR ADOLESCENTS THROUGH MOVEMENT) ON REDUCING DYSMENORRHEA PAIN LEVELS

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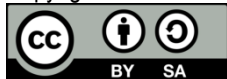
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ABSTRACT

Menstrual pain has a significant impact on teenage girls as it disrupts their daily activities. Dysmenorrhea that often occurs in adolescents is primary dysmenorrhea, which is menstrual pain that occurs after the first few years of menstruation. One of the exercises that can be used to alleviate dysmenorrhea is gymnastics. Research Objective: To determine the effect of AMIRKAN exercise on the reduction of menstrual pain in junior high school students in Labuapi District. This type of research is pre-experimental with a one group pretest-posttest design. The population in this study consists of all seventh and eighth-grade female students from each school: SMPN 1 Labuapi with 134 students, SMPN 2 Labuapi with 134 students, and SMPN 3 Labuapi with 137 students. The sampling technique was based on calculations using Proportional Random Sampling according to inclusion and exclusion criteria, totaling 100 students. Data analysis used the chi-square test. The research shows that the Amirkan exercise (anti-dysmenorrhea for adolescents through movement) has an effect on reducing dysmenorrhea pain levels among seventh and eighth-grade female students at junior high schools in Labuapi District. The Amirkan exercise intervention, performed regularly 2-3 days before menstruation, can stretch the abdominal and pelvic muscles, making it a potential effort to reduce menstrual pain.

Keywords: dysmenorrhea, exercise, adolescent girls,

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INTRODUCTION

Puberty is the beginning of sexual maturation, a period during which a child undergoes physical, hormonal, and sexual changes. At this stage, the reproductive organs begin to function, and hormonal changes occur, characterized by menstruation. (Elisanti & Ardianto, 2021). The problem experienced by most women during menstruation is discomfort or severe pain often referred to as menstrual pain (dysmenorrhea). Menstrual pain can be caused by an imbalance of the hormone progesterone in the blood, resulting in discomfort. This condition usually causes symptoms such as nausea and characteristic lower abdominal pain. Menstrual pain has a significant impact on teenage girls because it disrupts their daily activities. Dysmenorrhea that often occurs in adolescents is primary dysmenorrhea, which is menstrual pain that occurs after the first few years following menarche (first menstruation) (Kural et al., 2015; Ní Chéileachair et al., 2022).

The incidence of menstrual problems is very high worldwide. On average, more than 50% of women in all countries suffer from menstrual problems. The high number is believed to be caused by various unreported symptoms. Many women buy medication on their own and do not go to the doctor. It is estimated that nearly 90% of women in the United States suffer from dysmenorrhea, 10-15% experience severe dysmenorrhea, 37% experience moderate dysmenorrhea, and 49% experience mild dysmenorrhea. As many as 14% of teenage girls do not attend school because they experience menstrual pain and cannot do anything. (Meylawati & Anggraeni, 2021). According to the Indonesian Ministry of Health in 2016, the prevalence of adolescent girls in Indonesia experiencing menstrual pain was around 55%. From research conducted in Indonesia, the incidence rate of dysmenorrhea was 64.25%, consisting of 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhea. (Wulanda, Luthfi, and Hidayat 2020).

Menstrual pain treatment includes drug therapy and non-drug therapy. Drug therapy may include analgesics (Unnisa et al. 2022). Non-drug treatments commonly used to reduce menstrual pain include herbal medicines, nutritional supplements such as vitamin E, acupuncture, hypnotherapy, relaxation, and exercise. Exercise therapy can reduce dysmenorrhea in several ways, including relieving menstrual pain by reducing stress, increasing local metabolism, and increasing local blood flow to the pelvis. In addition, exercise for dysmenorrhea can also increase endorphin production (Kumalasari, 2017).

Gymnastics is one of the sports that can relieve menstrual pain. Gymnastics is one of the relaxation techniques that can be used to relieve pain (Prastiwi, Hidajaturokhmah, and Anggraeni 2021). Gymnastics as a physical activity allows the production of endorphins. Endorphins are produced in the brain and spinal cord. This hormone acts as a natural brain relaxant, causing a pleasant sensation. This exercise can help increase blood flow to the muscles around the uterus, which can reduce or eliminate pain. The movements consist of muscle relaxation and stretching. (Kumalasari, 2017). Physical activities that can be performed to reduce menstrual pain in adolescents include exercise movements such as AMIRKAN exercise, which stands for Anti Dysmenorrhea for Adolescents with Movement.

According to research (Gamit et al., 2014), exercises that effectively reduce the dysmenorrhea scale include abdominal stretching exercises that enhance abdominal muscle strength, flexibility, and endurance under certain conditions, as well as breathing stretches for relaxation, tension release, and improved lung ventilation. Blood oxygen can reduce the dysmenorrhea scale. The results of the research conducted by Kumalasari between 2011 and 2016 showed that after dysmenorrhea training, the average woman experienced a decrease in menstrual pain with a score of $p < 0.05$. (Kumalasari, 2017).

The purpose of this study is to determine the effect of AMIRKAN exercise on the reduction of menstrual pain among junior high school students in Labuapi District in 2021.

METHOD

The type of this research is pre-experimental with a one group pretest-posttest design. This research was conducted from April to October 2021 at SMP Negeri Labuapi in the Labuapi district, West Lombok Regency. The population in this study consists of all seventh and eighth-grade female students from each school: SMPN 1 Labuapi with 134 students, SMPN 2 Labuapi with 134 students, and SMPN 3 Labuapi with 137 students. The sampling technique was based on Proportional Random Sampling calculations according to inclusion and exclusion criteria, including seventh and eighth-grade students experiencing dysmenorrhea during menstruation, experiencing primary dysmenorrhea, with regular menstrual cycles, resulting in a total of 100 students. The Amirkan exercise intervention was given once per menstrual cycle, specifically 2-3 days before menstruation. Data analysis used univariate and bivariate analysis. The analysis test used is the chi-square test. The research was conducted based on the Health Research Ethics Committee of Mataram University with No: 373/UN18.F7/ETIK/2021.

RESULTS

The distribution of respondents based on the characteristics of Age, Age at First Menstruation, and Body Mass Index (BMI) in the video-based exercise group and the in-person exercise group can be explained in Table 1 as follows:

Table 1. Characteristics of Respondents Based on Age, Age at First Menstruation, and Body Mass Index (BMI).

No	Characteristics	n	%
1	Age		
	15 years	54	54
	16 years	46	46
2	Age at First Menstruation		
	11 years	23	23
	12 years	44	44
	13 years	33	33
	14 years	0	0
3	Body Mass Index (BMI).		
	Normal	76	76
	Underweight	15	15

Overweight	9	9
Amount		

Source: Primary Data 2021

Based on Table 1, it shows that the majority of respondents are 15 years old, with 54 female students (54%). The most common age for the first menstruation is 12 years old, with 44 female students (44%). The Body Mass Index is in the normal category with 76 female students (76%), underweight with 15 female students (15%), and overweight with 9 female students (9%).

Table 2. Distribution of Respondents Based on Pain Levels Before and After Intervention

No	Knowledge Variable	n	%
1.	Before Intervention (Pre)		
	Mild Pain	8	16%
	Moderate Pain	17	34%
	Severe Pain	25	50%
	Severe Pain Uncontrolled	0	0%
2	After Intervention (Post)		
	Mild Pain	40	80%
	Moderate Pain	10	20%
	Severe Pain	0	0%
	Severe Pain Uncontrolled	0	0%
3	Comparison of pain before and after		
	P value	0,000	
	Uji chi square ($p < 0,05$)		

Based on Table 2, it shows that respondents before the intervention experienced pain levels categorized as severe pain (7-9) in 25 students (50%) and moderate pain (4-6) in 17 students (34%). Then, after the intervention, they experienced pain levels categorized as mild pain (1-3) in 40 students (80%) and moderate pain (4-6) in 10 students (20%).

Based on the results of the Chi Square test, regarding the effect of Amirkan exercise on the reduction of dysmenorrhea pain levels among junior high school students in Labuapi District, the statistical analysis showed a p-value of 0.000 or $p < \alpha = 0.05$, thus H_0 is rejected and H_a is accepted. In conclusion, there is an average influence of the intervention both before and after it was administered.

DISCUSSION

Amirkan exercise intervention (Anti Dysmenorrhea in Adolescents through Movement) is one of the physical activities that can be done by adolescents and has a significant impact on the intensity of dysmenorrhea pain in adolescents. This is because physical activity carried out by adolescents before menstruation through the Amirkan movement can increase the comfort and flexibility of the abdominal, pelvic and thigh muscles so that it can reduce the scale of pain during menstruation. Amirkan exercise movements can also relax cramped abdominal muscles, so that pain during menstruation can be reduced.

Physical activity such as exercise can cause an increase in endorphin hormones. Endorphin hormones are produced by the brain and spinal cord which function to create feelings of calm and comfort. An athlete is less likely to experience dysmenorrhea because of the physical activity they do. Conversely, a woman who is obese tends to experience dysmenorrhea due to lack of physical activity, which results in reduced production of endorphin hormones in her body. (Solihah et al. 2023).

In addition to the direct intervention of Amirkan exercises given to respondents, the researchers also used video media. Information can be enhanced through the use of video media, as video media is suitable and engaging for conveying information and can influence health education outcomes. Video media captures the attention of health education targets because it presents moving images, text, and sound that explain the displayed images. Visual media presents material concisely, clearly, and understandably, making it easier to comprehend and improving respondents' memory retention. Audiovisual media play an

important role in informing and persuading behavioral change. Audiovisual media make significant contributions to the informational and persuasive aspects of behavioral change. (Sorea and Woferst 2013).

Dysmenorrhea exercises can reduce menstrual pain by focusing on stretching the abdominal, pelvic, and lower back muscles. Dysmenorrhea exercises can also provide a gradually relaxing sensation, which can reduce menstrual pain by producing endorphins. (Nurjanah, Yuniza, and Iswari 2019). According to the research (Novadela, Rosmadewi, and Wahyuni 2017), there is a very significant effect on the level of dysmenorrhea before and after dysmenorrhea exercise in adolescents receiving dysmenorrhea therapy. Women, especially adolescent girls who experience dysmenorrhea, should perform dysmenorrhea exercises because they can effectively reduce the level of dysmenorrhea.

Dysmenorrhea exercises are exercises that help stretch the abdominal, pelvic, and pelvic muscles. In addition, dysmenorrhea exercises can gradually provide comfort and reduce pain if done regularly. The purpose of exercise for dysmenorrhea is to help relieve pain in adolescents experiencing dysmenorrhea and to prevent dysmenorrhea, an alternative treatment for dysmenorrhea. Exercise or gymnastics should be done in the morning or evening, preferably 3-5 times a week for 30 minutes (Nurjanah, Yuniza, and Iswari 2019).

Body exercises or gymnastics performed during dysmenorrhea can help tense muscles to relax. The uterine muscles that experience tension during dysmenorrhea, when given body exercises or gymnastics focused on the pelvic area, cause the tense uterine muscles to relax and the pain gradually decreases. When exercising, a person becomes more comfortable, cheerful, and can improve the delivery of oxygen to the muscles. (Mariza and Lazary 2022).

CONCLUSION

Based on the research results, there is an influence of Amirkan gymnastics (anti-dysmenorrhea for

teenagers with movements) on the reduction of dysmenorrhea pain levels among seventh and eighth-grade female students at junior high schools in Labuapi district. The Amirkan exercise intervention can stretch the abdominal, pelvic, and thigh muscles. In addition, dysmenorrhea exercises can gradually provide comfort and reduce pain if done regularly.

Advice for female students experiencing dysmenorrhea is to perform AMIRKAN exercises (Anti Dysmenorrhea for Teenagers with Movement) regularly 2-3 days before menstruation as an effort to reduce pain during menstruation. It is hoped that schools can create an AMIRKAN exercise program for female students experiencing dysmenorrhea. And for future researchers, they can utilize local wisdom that can reduce pain during menstruation.

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