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Research Article

The Effect of William's Flexion Exercise on Reducing the Intensity of Dysmenorrhea in Young Women at SMP Negeri 1 Sobang, Pandeglang Regency

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Abstract

Aims: Dysmenorrhea is a disorder characterized by lower abdominal pain that occurs during menstruation. Dysmenorrhea problems in young women if not addressed immediately can adversely affect adolescent productivity including learning activities. Data from the Pandeglang District Health Office in 2021 reported dysmenorrhea cases in adolescents of 62.4% of the 5,000 adolescents surveyed and 35% of them complained of limited activity due to dysmenorrhea.
Method: The research method uses quasi-experiments with a pre-posttest one group design. Sample of this study was 20 young women in grades IX who experienced dysmenorrhea with sampling technique uses total sampling. Instruments use questionnaires. Bivariate analysis uses the paired t-test.
Results: The average intensity of menstrual pain in young women before being given physical exercise William's Flexion Exercise technique is 5.70 and after being given physical exercise William's Flexion Exercise technique performed for ±7-10 minutes is 2.85. Statistical tests results showed that there was an effect of William's Flexion Exercise on reducing the intensity of menstrual pain (dysmenorrhea) in young women (p value = 0.000).
Conclusion: The provision of physical exercise William's Flexion Exercise technique is effective in reducing the intensity of menstrual pain in young women at SMP Negeri 1 Sobang, Pandeglang Regency. We recommend that young women can learn the physical exercise of William's Flexion Exercise technique and diligently practice the physical exercise to be applied by themselves when experiencing menstrual pain.

Keywords:
William's flexion exercise, dysmenorrhea, young women

INTRODUCTION

Rapid physical changes occur during the transition period between childhood and maturity that are not compensated by psychological (mental) changes. The physical changes that occur include the maturation of the reproductive organs in order to carry out the reproductive function. Menstruation (menstruation) is a sign that the reproductive organs are working properly in women. Some teenagers have menstrual irregularities, specifically pain during menstruation (dysmenorrhea). Dysmenorrhea is a painful uterine muscle spasm that happens during menstruation and is one of the reasons of menstrual disorders. Dysmenorrhea can have a negative impact on teenage development (1).

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During the transition period between childhood and adulthood, there are fast bodily changes that are not balanced by psychological (mental) changes. Physical changes include the maturation of reproductive organs in order to carry out the reproductive function. Menstruation (menstruation) marks the functioning of the reproductive organs in women. Some teenagers have menstrual problems, such as discomfort (dysmenorrhea). Dysmenorrhea is a painful uterine muscle spasm that happens during menstruation and is one of the reasons of menstrual disorders. Dysmenorrhea can be detrimental to teenage growth (1).

According to the World Health Organization (WHO), the incidence of severe dysmenorrhea in all countries is over 50% of the population, with 10-15% experiencing mild dysmenorrhea. The prevalence is higher in young women, with estimates ranging from 67% to 90% for women aged 17 to 24 years. Dymenorrhea affects 45-97% of women in Europe, 52-90% of women in America, 44-95% of women in Africa, and 45-90% of women in Asia (2).

According to the 2020 Central Bureau of Statistics report, the prevalence of dysmenorrhea cases in Indonesia is quite high, at 64.25%, with the majority of cases occurring in adolescents aged 15 to 24 years. In Indonesia, the incidence of main type dysmenorrhea is 54.88%, while secondary type dysmenorrhea is 9.36%, with mild dysmenorrhea pain levels of 49%, moderate 34%, and severe 17%, resulting in 15% restricting their daily activities during menstruation and 8-10% of young women not attending school (3).

In 2021, the Banten Provincial Health Office stated, in partnership with BPS, that the incidence of dysmenorrhea in Banten was 60.19% of the 10,000 adolescents surveyed. The frequency of primary type dysmenorrhea was 52.61% in teenagers aged 14-24 years, whereas the secondary type was 7.58%, with mild dysmenorrhea pain levels of 47%, moderate 38%, and severe 15% (4). In 2021, the Pandeglang District Health Office, in partnership with the Pandeglang BPS, reported cases of dysmenorrhea in teenagers, with the prevalence of cases being 62.4% of the 5,000 adolescents surveyed, with young women aged 14-24 years experiencing 35% of the cases. Some of them reported that dysmenorrhea limited their activities (5). Monthly pain is a common problem in women; severe monthly pain can cause a woman to see a clinic or doctor to have herself tested and can force a woman to stop all daily activities and rest for several hours or days, as in cases of dysmenorrhea. Stress causes young girls to drop out or not attend school (6). During menstruation, the breasts feel heavy, full, enlarged, and tender, back pain, a feeling that the pelvic cavity is getting fuller, headaches and acne appear, increased irritability or sensitivity, increased metabolism and followed by a feeling of fatigue, basal body temperature increased 0.2-0.4°C, cervix cloudy, sticky, impenetrable to sperm, dry in a granular pattern, ostium gradually closes, and uterine (7).

Dysmenorrhea has a major impact on quality of life, work productivity, absenteeism, social interactions and can also cause significant economic losses due to medical expenses and medical care. Dysmenorrhea also has a negative impact on young women, namely fatigue, pain in the lower back, feelings of anxiety and tension, headaches, confusion, nausea, vomiting, diarrhea, stomach cramps and abdominal pain and activity disturbances. In addition, dysmenorrhea in young women can cause disruption in teaching and learning activities, not concentrating on learning, a tendency to sleep in class during teaching and learning activities so that it affects achievement in the academic and non-academic fields (8).

There are two types of therapy that can be used to treat dysmenorrhea, namely pharmacological therapy and non-pharmacological therapy. Pharmacologically, to relieve pain caused by

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dysmenorrhea, you can use analgesic class of drugs for pain complaints such as aspirin, mefenamic acid, paracetamol, and feminax. Non-pharmacological treatment of dysmenorrhea can be done using traditional medicines such as betel leaf water, papaya leaves, turmeric rhizome, compresses using warm water or sports such as walking and stretching muscles (9).

The researchers used a non-pharmacological approach to treating dysmenorrhea in this trial, stretching the muscles using the William's Flexion Exercise technique. William's Flexion Exercise movements are designed to strengthen the abdominal muscles and mobilize the lower lumbar. Lower abdominal and lumbar muscular contraction puts pressure on the big blood veins in the belly, increasing the volume of blood moving throughout the body, including the reproductive organs. This can improve the delivery of oxygen to blood vessels that are constricted, hence reducing menstruation pain (10).

Research conducted by (11) the results show that there is an effect of the William's Flexion Exercise technique on the level of menstrual pain (dysmenorrhea). Before the William's Flexion Exercise technique was carried out, female students experienced dysmenorrhea on a scale of 6 and after the William's Flexion Exercise technique the pain due to dysmenorrhea decreased to a scale of 2. Other research conducted by (12) also showed similar results that there was an effect of William's Flexion Exercise on reducing the intensity of menstrual pain (Dysmenorrhea). Students before being given the William's Flexion Exercise technique experienced menstrual pain on a scale of 6 and after being given therapy with the William's Flexion Exercise technique, the pain scale decreased to a scale of 3.

Researchers at Sobang 1 Public Middle School conducted preliminary studies with 10 class IX students who had dysmenorrhea, obtaining evidence showing 6 of them experienced moderate dysmenorrhea and 4 others experienced mild dysmenorrhea. When asked about activity disruptions caused by dysmenorrhea, 7 people said it was very painful, made them uncomfortable, and interfered with daily activities such as lazy studying and not concentrating in class because they felt tired, dizzy, not in the mood, back pain, nausea, and stomach cramps. When asked what treatment they used to reduce dysmenorrhea, four people said they used warm compresses during menstrual pain, two people said they took pain relievers from the pharmacy, one person said they consumed turmeric tamarind, and three others said they just let it go. When asked if they had ever treated dysmenorrhea with William's Flexion Exercise approach, they all said no. Researchers believe it is critical to do research on "The Effect of William's Flexion Exercise on Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Young Girls at SMP Negeri 1 Sobang, Pandeglang Regency in 2022."

METHODS

A quasi experiment with a one group pre-posttest design technique was used in this investigation. This study was carried out at SMP Negeri 1 Sobang in Pandeglang Regency. The study was carried out in November 2022. This study included 20 class IX adolescent girls who suffered from dysmenorrhea. The research sample consisted of 20 people, and the sampling strategy used was complete sampling. A questionnaire was used to collect data. Data were examined univariately and bivariately using paired t-test statistical methods.

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RESULTS

Univariate analysis

Table 1. Frequency Distribution of Menstrual Pain (Dysmenorrhea) in Young Girls Before and After Being Given William's Flexion Exercise Technique at SMP Negeri 1 Sobang Pandeglang

Menstrual Pain Intensity	*Pre-test*		*Post-test*	
	(f)	(%)	(f)	(%)
No pain (scale 0)	0	0	0	0
Mild pain (scale 1-3)	0	0	15	75
Moderate to severe pain (scale 4-6)	15	75	4	20
Very severe pain (scale 7-9)	5	20	1	5
Extremely severe pain (scale 10)	0	0	0	0
Total	**20**	**100**	**20**	**100**

Based on Table 1, it can be concluded that most of the intensity of menstrual pain in young women before being given the physical exercise of the William's Flexion Exercise technique was moderate to severe pain (scale 4-6), as many as 15 people (75%) and after being given the physical exercise of the William's Flexion technique Exercise, most of the intensity of menstrual pain in young women decreased to mild pain (scale 1-3), as many as 15 people (75%).

Table 2. Average Intensity of Menstrual Pain in Young Girls Before and After Being Given William's Flexion Exercise Technique at SMP Negeri 1 Sobang Pandeglang

Menstrual Pain Intensity	*n*	*M*	*SD*	*Min*	*Max*
Pre-test	20	5,70	1,41	4	9
Post-test		2,85	1,49	1	7

Based on Table 2, it shows that the average intensity of menstrual pain in young women before being given the physical exercise of the William's Flexion Exercise technique is 5.70 and after being given the physical exercise of the William's Flexion Exercise technique which is carried out for ± 7-10 minutes in accordance with the SOP, the average the average menstrual pain intensity decreased to 2.85.

Bivariate Analysis

Table 3. The Effect of William's Flexion Exercise on Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Young Girls at SMPN 1 Sobang, Pandeglang Regency

Variable	*Pre-test*		*Post-test*		*M-Df*	*t*	*P value*
	M	*SD*	*M*	*SD*			
Menstrual pain intensity	5,70	1,41	2,85	1,49	2,85	17,10	0,000

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Based on the data in Table 3, it shows that there was a decrease in the intensity of menstrual pain in young women after being given physical exercise using the William's Flexion Exercise technique, where the average intensity of menstrual pain before treatment was 5.70 and after treatment was 2.85. The results of the statistical test analysis obtained a p-value = 0.000 (<α 0.05), meaning that there is an effect of William's Flexion Exercise on reducing the intensity of menstrual pain (dysmenorrhea) in young women at SMP Negeri 1 Sobang, Pandeglang Regency in 2022.

DISCUSSION

According to the findings of this study, most young women (75%) suffered moderate to severe menstrual pain before receiving the intervention, with an average pain intensity of 5.70. The average intensity of menstrual pain for young women decreased after being given the William's Flexion Exercise technique, which was carried out for 7-10 minutes in accordance with the SOP, where most (75%) experienced mild pain (scale 1-3) with an average intensity of pain 2.85, indicating that most of the respondents experienced a decrease in the intensity of menstrual pain before and after treatment. This was supported by statistical analyses that yielded a p value = 0.000 (0.05), indicating that William's Flexion Exercise had an effect on reducing the intensity of menstruation pain in young women at SMP Negeri 1 Sobang Pandeglang in 2022.

William's Flexion workout is a low back pain workout strategy that uses ways to strengthen the abdominal muscles and gluteus maximus muscles while relaxing the back extensor muscles. Some of William's Flexion Exercise movements are designed to strengthen the lower abdominal muscles, putting pressure on the big blood veins in the belly, increasing the volume of blood moving throughout the body, including the reproductive organs. This can increase the delivery of oxygen to blood vessels that are constricted, reducing menstruation pain (13).

William's Flexion Exercise physical exercise technique can be done by anybody and anyplace to reduce menstrual pain. Furthermore, there are no additional fees or tools required to complete this task. There is no need for music or tools to support the activity. So, whenever you want to do it, you can do it anyplace and it is simple. This exercise has also been shown to help with menstruation pain (dysmenorrhea) (14).

The findings of this study are consistent with the findings of a previous study (11) that found an effect of the William's Flexion Exercise technique on the level of menstrual discomfort (dysmenorrhea), as determined by a statistical test (p=0.000). According to his research, before using the William's Flexion Exercise technique, students had dysmenorrhea on a scale of 6, but after using the William's Flexion Exercise technique, the discomfort from dysmenorrhea was reduced to a scale of 2. Reinforced by research, there was an effect of William's Flexion Exercise on reducing the intensity of menstruation pain (Dysmenorrhea). Students reported menstruation discomfort on a scale of 6 before receiving William's Flexion Exercise therapy, and the pain scale fell to a scale of 3 after receiving William's Flexion Exercise therapy (12).

The researcher believes that delivering physical exercise using the William's Flexion Exercise technique has an influence on the intensity of monthly pain since exercise has several benefits, one of which is the ability to relieve stomach cramps caused by menstruation pain. Furthermore, in this study, all respondents thoroughly participated in the William's Flexion Exercise according to the SOP, which was carried out for 7-10 minutes, so that most of the respondents felt the effect, but there were some respondents who did not really feel the significant effects of physical exercise who were given because they still have moderate to severe menstrual pain that interferes with activities. This can happen as a result of other factors like excessive stress,

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unhealthy eating habits, nutritional status, and exercise habits, or it can be caused by medical factors like hormonal disorders (Polycystic Ovary Syndrome), endometriosis, and fibroids (non-small growths). cancer).

CONCLUSION

Based on the findings of the investigation, the following conclusions can be drawn: The majority of respondents report a low quality of life (61.5%), a lack of family support (57.1%), depression (63.3%), are stigmatized negatively (61.2%), and are married (53.1%). Before receiving physical exercise utilizing the William's Flexion Exercise approach, the average intensity of menstruation discomfort in young women was 5.70. The average level of menstruation pain in young women after undergoing physical activity using the William's Flexion activity technique for 60 minutes was 2.85. Statistical analyses revealed that William's Flexion Exercise had an effect on reducing the intensity of menstruation discomfort (dysmenorrhea) in young women at SMP Negeri 1 Sobang, Pandeglang Regency (p = 0.000).

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