



The Effect of Health Education on Dysminorea on Adolescent Women's Knowledge and Attitudes in Managing Menstrual Pain at SMA Negeri 13 South Halmahera

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Abstract : Adolescent girls often complain of dysmenorrhea, or discomfort during menstruation, which can range from mild to severe and interfere with daily activities, especially learning. To prevent this disease from lowering the quality of life of adolescents, it must be treated. Education about dysmenorrhea and its treatment is one of the actions that can be taken. The study used a pre-experimental design approach, a quantitative research design, and a single-group pre-test-post-test research plan without a control group design. Using a proportional stratified random sampling approach, 57 female students of class X formed a research sample. The use of films on dysmenorrhea for health education serves as an independent variable of the study. Adolescent girls' knowledge and attitudes about dysmenorrhea function as a study-dependent variable. The validity and reliability of these instruments are checked. Univariate and bivariate analysis were used as data analysis methods in this study. The Wilcoxon Signed Rank Test is used for hypothesis testing. It was determined that health education using dysmenorrhea film had an impact on the knowledge and attitudes of adolescent girls about the treatment of dysmenorrhea based on the findings of the Wilcoxon Signed Rank Test (Asymp.) with a value of 2-tailed 0.000 ($p < 0.05$). The findings of the study showed that among grade 10 students at SMA Negeri 13 Selatan Halmahera, health education through dysmenorrhea films had an impact on the knowledge and attitudes of adolescent girls about the treatment of dysmenorrhea.

Keywords: Adolescent Girls; Dysmenorrhea; Film-Based Education; Health Education; Knowledge.

1. INTRODUCTION

Complaints of menstrual pain are often a problem for women when they consult with health professionals regarding the menstrual cycle. When unstable psychological factors such as stress, depression, excessive anxiety, and excessive emotions—both sadness and happiness—are present, the condition can worsen (Khoerul, 2022). Since dysmenorrhea is now considered a psychiatric disease and an inevitable aspect of femininity, it often causes pain for women. Dysmenorrhea is a pathological problem that often affects women of all ages, according to Kotta et al. (2022). According to estimates, dysmenorrhea causes women in the U.S. to lose more than 1.7 million workdays per month (Khoerul Ummah, 2022).

Both adolescent boys and girls go through a transitional phase called adolescence. During this period, various changes occurred in the biological, psychological, and reproductive systems. During this transition period, individuals will reach mental maturity as well as maturity. In women, the changes that occur are similar to other women in general, such as the arrival of menstruation, increased body growth, breast enlargement, the appearance of fine hair in the armpit area and reproductive organs, and various other changes (hendra, 2024)

Dysmenorrhea is a term for abdominal pain caused by uterine contractions during menstruation. Before reaching its maximum severity, menstrual pain can continue from a few hours to a few days after the start of menstruation. The syndrome often appears 1-3 years after menarche, throughout adolescence, or between the ages of 15 and 16. This condition affects many individuals, but few know how to overcome it. Complaints that teenagers often experience include pain in the lower abdomen, stiffness in the waist and back, body feeling weak, and sometimes accompanied by nausea, headaches, and even almost fainting (Hendra et al., 2024).

Pain in the lower abdomen that can radiate to the lower back is known as dysmenorrhea. Pelvic discomfort resulting from certain diseases or conditions is referred to as secondary dysmenorrhea. The majority of women experience discomfort or cramping in their abdomen before menstruation, which usually starts one day before menstruation and lasts for two to three days. Progesterone imbalances, increased prostaglandin levels, stress, and psychological factors are the causes of the disease. Dysmenorrhea is a common health problem that affects women of reproductive age. This can decrease the quality of life, prevent young people from participating in social activities, and force a person to rest, which can affect daily activities and productivity (Kristian, 2024).

If dysmenorrhea is not treated properly, this condition can interfere with various daily activities in adolescents. In Indonesia, the majority of women who experience menstrual pain tend to choose the use of widely available analgesics in the market as the main choice (Oktavianto et al., 2023). However, the long-term use of pharmacological drugs without paying attention to the rules or proper medical indications has the potential to cause adverse effects on health. The high rate of consumption of pain relievers in adolescents is largely influenced by their lack of understanding of how to handle menstrual pain without drugs (non-pharmacological) which actually also has effectiveness (Oktavianto et al., 2023).

According to WHO statistics in 2020, an average of 50% of adolescent girls experience dysmenorrhea. According to reports, the prevalence of secondary dysmenorrhea is around 45.11% and primary dysmenorrhea is around 54.89% in Indonesia. Pain treatment initiatives are also associated with this disease (Martina & Indarsita, 2019).

Dysmenorrhea affects between 60–70% of Indonesian women, making it a fairly common disorder. Dysmenorrhea is found to be common in 64.5% of women, with most cases occurring in the adolescent age range of 17 to 24 years. 54.89% of cases are primary dysmenorrhea, while the remaining 45.11% are secondary dysmenorrhea (Silaen et al., 2019)..

In Indonesia, primary dysmenorrhea is a reproductive health problem whose prevalence continues to increase among adolescent girls, around 77% of adolescent girls aged 15–19 years report experiencing moderate to severe menstrual pain, with 30% of them experiencing regular school absences. Cultural factors, lack of menstrual health education, and stigma against talking about menstruation are the main obstacles to proper management. Adequate knowledge about the menstrual cycle and how to cope with pain can help reduce the physical and psychological impacts, but access to menstrual health information and services is still unequal between urban and rural areas (Hendianti et al., 2022) Adolescents are more likely to take over-the-counter medications without guidance than to seek trained medical help. Therefore, improving menstrual health literacy is urgent, especially among students. Without systemic intervention, dysmenorrhea has the potential to interfere with adolescents' physical, academic, and social development (Ardela et al., 2024)

A non-pharmacological approach that has been proven to be able to reduce the degree of pain due to dysmenorrhea is a relaxation technique. In theory, menstrual pain complaints can also be reduced through methods without medication or without medical intervention, for example by giving warm compresses using a bottle of hot water placed on the abdomen or lower back that has cramps. Pain reduction can also be done by gently massaging or rubbing the painful area, accompanied by deep and slow breathing techniques to bring comfort and relaxation to the body. Soaking in warm water also provides a soothing sensation. In addition, a swinging position that makes the uterus hang downwards can help reduce tension. The use of aromatherapy also has the benefit of calming the mind as well as improving overall relaxation. The application of acupressure therapy at the SP6 point for 20 minutes per session which was carried out routinely for two consecutive months has proven to be effective in relieving dysmenorrhea pain in female students of the Faculty of Health Sciences, Jenderal Achmad Yani University (Fitkes Unjani). The effectiveness of this therapy is more optimal if it is done regularly and continuously over a certain period of time (Jatnika & Badrujamaludin, 2022)

2. RESEARCH METHOD

This study used a pretest and posttest design of one group without a control group, utilizing quantitative approaches and pre-experimental designs. There are 67 tenth grade students at State Senior High School 13 in South Halmahera. The Slovin formula is used in statistical calculations to calculate sample sizes. This calculation shows that 57 responses make up the sample size. The method used was proportional stratified random sampling.

Univariate and bivariate analyses are used. The purpose of univariate analysis is to characterize each research variable. Prevalence Ratio calculation is used in bivariate analysis to ascertain the impact of independent and dependent variables.

3. RESULTS AND DISCUSSION

Results

Table 1. Young Women's Knowledge of *Disminore*

Level Knowledge	Pre test	%	Post Test	%
Good	10	17,5 %	51	89,5%
Enough	22	38,6 %	6	10,5 %
Less	25	43,9 %	0	0%
Quantity	57	100 %	57	100 %

The range of knowledge levels of adolescent girls before and after health education using film on dysmenorrhea is shown in Table 1. Twenty-five students (43.9%) of the respondents were included in the pre-intervention low-knowledge group. Only 10 students (17.5%) had a high level of knowledge, compared to 22 students (38.6%) who had sufficient understanding. There was a significant increase in knowledge after video-based health education (post-test). 51 students (89.5%) of the respondents had strong knowledge, a significant improvement. Only six students (10.5%) had sufficient knowledge, while none had insufficient knowledge (0%). These findings suggest that video-based health education significantly improves adolescents' understanding of dysmenorrhea.

Table 2. Young Women's Attitudes About *Disminore*

Level Knowledge	Pre test	%	Post Test	%
Good	12	21,1 %	50	87,7%
Enough	21	38,6 %	7	12,3%
Less	24	42,1 %	0	0%
Quantity	57	100 %	57	100 %

Adolescent girls' perspectives on dysmenorrhea control before and after receiving health education through video media are shown in Table 2. The majority of respondents (24 students) showed a negative attitude during the pre-test. Only 12 (21.1%) had a positive attitude, compared to 21 (38.6%) who had a fairly good attitude. There was a significant improvement after the post-test. The percentage of positive sentiment increased to 50 (87.7%). Only seven people (12.3%) still had a good enough attitude, while none had a bad attitude (0%). These results prove that health education through video improves adolescents' attitudes towards dysmenorrhea while increasing knowledge.

Table 3. The Relationship Between Knowledge and Attitude in Dealing with Disorders in Adolescent Girls in Class X of SMA Negeri 13 South Halmahera

Limitation	Attitude						P-value
	Positive		Negatives		Quantity		
	F	%	F	%	F	%	
Good	25	43,9 %	5	8,8	30	52,6	0,000
Enough	12	21,1	4	7,0	16	28,1	
Less	4	7,0	7	12,3	11	19,3	
Total	41	71,9	16	28,1	57	100	

With a p value of 0.000 and an alpha of 0.05, the findings of the study showed that there was a relationship between knowledge and attitudes of class X students at SMA Negeri 13 South Halmahera towards dysmenorrhea. According to these findings, young women who had a better understanding of dysmenorrhea tended to have a more positive attitude and sought more information on how to prevent recurrence. People with dysmenorrhea often have a good opinion about the treatment. On the other hand, those who are less experienced generally show an optimistic outlook. Lack of understanding of primary dysmenorrhea causes adolescents to not know the proper methods to reduce pain. This ignorance also has a negative impact on their self-management skills, so they do not understand effective steps to deal with dysmenorrhea complaints. Therefore, intensive assistance and education need to be provided to adolescents to improve their understanding of the causative factors and management of dysmenorrhea.

Overcoming primary dysmenorrhea can be done through pharmacological and non-pharmacological methods. If medication is not given, physical activity is the best option to relieve pain. Acupressure techniques and the administration of warm compresses have also been shown to be helpful. Physical exercise and heat therapy are other options as a substitute for the use of analgesic drugs. (Lindiawati, 2022) . Putinah's study in 2019 found a relationship between a person's level of knowledge and dysmenorrhea treatment techniques. According to this study, adolescent girls who have a strong understanding of dysmenorrhea are more likely to adopt non-pharmacological treatments. Pharmacological and non-pharmacological treatments for dysmenorrhea are not well understood by most respondents. Dysmenorrhea treatment is viewed negatively by most respondents. Menstrual pain management and views on its quality are significantly correlated.

Research by University et al. (2022) found that while some participants had a fairly good level of understanding, others were still poorly informed. Information on the management of dysmenorrhea was mostly received by respondents through print and electronic media. The

findings of the study show that insights into dysmenorrhea and its treatment methods in adolescent girls are quite varied.

Discussion

Teenage girls' knowledge of Dysmenorrhea

According to the study, 25 adolescent girls (43.9%) had little awareness about the management of dysmenorrhea before health education through video media, followed by 22 students (38.6%) with intermediate knowledge and 10 students (17.5%) with high knowledge. 51 children (89.5%) achieved a good level of knowledge and 6 students (10.5%) had intermediate understanding after health education, showing considerable improvement. As a result, the majority of post-education knowledge falls into the good group. These results are in line with the results of the research of Ningsih et al. (2017), whose pre-experimental study in Bolaang Mongondow, Central Sulawesi, found that health promotion using video media succeeded in increasing students' awareness of dysmenorrhea to a decent level.

Listyarini (2017) stated that the use of video media can produce wider knowledge because it is considered an interesting and effective way to convey information. Health education outcomes can benefit from the use of video. The target audience is attracted by video media, which uses music, text, and moving images to explain visuals. The material in the video is presented concisely, clearly, and easily understandable, thus facilitating the understanding process and strengthening the participants' memory.

Overview of Young Women's Knowledge of Dysmenorrhea

According to Bloom, knowledge is the result of the process of understanding that occurs when a person uses his or her five senses—especially sight and hearing—to examine or discover something. Individual behavior is strongly influenced by knowledge, and understanding-based actions often last longer (Darsini et al., 2019). According to this survey, the majority of young women know a lot about how to deal with dysmenorrhea. These results are in line with the high level of knowledge shown in research by Kristian Febriani (2021) and Salamah (2019). However, these findings differ from the findings of Siregar et al. (2024), which found that adolescents' knowledge is mostly at moderate levels, influenced by age-related variations in understanding.

The findings of this study contradict the findings of Djailani (2020), who found that 16 respondents (53.3%) had a low level of expertise. On the other hand, the study found that adolescent girls generally have a good understanding of dysmenorrhea, including its causes and treatments. This is because dysmenorrhea is a problem that often occurs among adolescents. According to Notoatmodjo (2017) in Djailani (2020), knowledge is the result of

the process of "recognition" that occurs when a person sees or feels certain things. Adolescents with good knowledge are usually more active in dealing with menstrual pain. With a more adequate understanding of dysmenorrhea, their actions in overcoming the condition also become more optimal.

The researchers concluded that respondents' experiences and strong desire to learn more about dysmenorrhea from friends, parents, teachers, and the internet contributed to their high levels of knowledge. However, due to a lack of awareness or desire to learn more about dysmenorrhea, some respondents had moderate and poor knowledge.

Attitudes of Young Women in Dealing with Dysminore

Attitude can be interpreted as an individual's response or reaction to an object, stimulus, or issue that is internal and has not been manifested in real action. Attitude also describes a person's tendency to act, either supporting or rejecting an object, and acts as a predisposition to behavior. A well-structured attitude consists of three main components, namely cognitive, affective, and conative aspects (Moudy & Syakurah, 2020).

This positive attitude is closely related to a good level of knowledge, because an attitude based on understanding tends to be more durable than an attitude that is not supported by adequate information. In addition, a high curiosity about dysmenorrhea, such as looking for references through the internet, discussing with teachers, or participating in health education activities, is also a supporting factor. However, the study also found a small percentage of adolescents who exhibited negative attitudes. This condition is triggered by a low understanding of the causes, signs and symptoms, as well as methods of handling dysmenorrhea, coupled with obstacles in obtaining information, such as difficulty accessing networks or reluctance to consult with health workers (Febriani, 2021)

The researchers concluded that these findings show that respondents with good understanding tend to show a positive attitude in dealing with dysmenorrhea. Attitudes that are built on knowledge usually have a longer endurance than attitudes that are not supported by adequate understanding. In addition, the high urge to seek information related to dysmenorrhea, either through internet media, teachers, friends, or other sources, also influences the formation of this attitude. Although most of the respondents showed a good attitude, there were still a number of young women who showed negative attitudes, which were influenced by low awareness about the causes, signs, and management methods of dysmenorrhea.

4. CONCLUSION

Dysmenorrhea is a common disorder experienced by women of reproductive age, characterized by pain in the lower abdomen that can radiate to the back. This condition can last 2–3 days, generally starting before menstruation, and is caused by hormonal imbalances, increased prostaglandins, and psychological factors. Dysmenorrhea has a real impact on quality of life, social activities, and daily productivity.

The results of the study show that most young women have good knowledge about dysmenorrhea and how to treat it. Adequate knowledge has a strong influence on attitudes, so the majority of respondents have a positive attitude in overcoming dysmenorrhea. This positive attitude is strengthened by high curiosity and efforts to find information through the internet, teachers, friends, or health workers. However, there are a small percentage of respondents with a less supportive attitude, which is generally due to low understanding, lack of information, or limited access to health information resources. Overall, these findings confirm that knowledge is a key factor that determines adolescent girls' attitudes and actions in dealing with dysmenorrhea. Systematic and continuous educational efforts are needed to improve understanding, encourage positive attitudes, and help adolescents manage dysmenorrhea symptoms more effectively

The results of the study showed that most of the girls in class X of SMK Negeri 13 South Halmahera had a positive attitude towards the handling of dysmo=inore. These findings are in line with research conducted by Kristin (2022), who found that 26 respondents (59.1%) had a positive attitude. Salamah's research (2019) also supports this finding, where 53 respondents (61.6%) showed a good attitude towards the handling of dysmenorrhea.

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